

## CHAPTER VI

# The First Camps

As contractors took the field, pressure for speed was growing more acute. After the fall of France, Britain lay in mortal danger. The new Konoye government in Japan embarked on a course of expansionism. The signing of the Tripartite Pact on 27 September 1940 brought into being the Rome-Berlin-Tokyo axis. A month later Italy invaded Greece. This same period witnessed positive measures by the Roosevelt administration to insure Great Britain's survival and curb Japanese aggression. The application of economic sanctions against Japan was followed shortly by the destroyer deal with Britain and promises to Churchill of large-scale aid. American neutrality was thus reduced to a fiction. Meeting preparedness deadlines assumed vital importance. The Army would have to be ready when the call came to fight, or the nation would face disaster.

In launching the defense program, President Roosevelt had outlined two major objectives: first, a protective force and, second, the planes, guns, tanks, and ammunition to make this force effective. The industrial capacity to equip and maintain a modern army could be built up only over a period of several years; but men could be mobilized and training begun almost immediately. The War Department was therefore concentrating first on increasing the size of the Army. If plans to call the National Guard and

to conscript a citizen army were to succeed, camps would have to be provided quickly. Emphasizing the critical importance of this phase of construction, General Marshall stated in September 1940, "It should be understood first of all that shelter is the decisive factor in our plans."<sup>1</sup>

During August 1940, in response to a request from Congress, Hartman made known his latest estimate of the time required for carrying out the camp program. Housing for one to two million men could be ready three or four months after locations had been decided on and funds had been voted. "Inasmuch as certain basic data is available covering the existing reservations," he explained, "temporary shelter at these reservations can be constructed complete with utilities within three months. At new locations certain basic data must be determined which . . . will require approximately one month's time." In these calculations, Hartman assumed ideal conditions. He warned that strikes, bad weather, or shortages of materials would cause delays.<sup>2</sup>

General Marshall demanded of Hartman not what was feasible but what he believed was necessary. Schedules imposed on the Construction Division

---

<sup>1</sup> S Subcomm of the Comm on Appns, 76th Cong, 3d sess, *Hearings on H R 10572*, p. 5.

<sup>2</sup> Memo, TQMG for ASW, 12 Aug 40. QM 400.13 (Mun Program—FY 1941).

TABLE 7—SCHEDULE FOR HOUSING NATIONAL GUARD DIVISIONS  
At Peace Strength—12,978 Men

Priority	Division	Station	Occupancy Date
I	30th	Jackson (S.C.)	16 September 1940
I	41st	Lewis (Wash.)	Do
I	44th	Dix (N.J.)	Do
I	45th	Sill (Okla.)	Do
II	27th	McClellan (Ala.)	15 October 1940
II	31st	Blanding (Fla.)	Do
II	32d	Beauregard (La.)	Do
II	35th	Robinson (Ark.)	Do
II	36th	Bowie (Tex.)	Do
II	37th	Shelby (Miss.)	Do
III	34th	Claiborne (La.)	15 November 1940
III	38th	Shelby (Miss.)	Do
III	40th	San Luis Obispo (Cal.)	Do
III	43d	Blanding (Fla.)	Do
IV	26th	Edwards (Mass.)	15 December 1940
IV	28th	Indiantown Gap (Pa.)	Do
IV	29th	Meade (Md.)	Do
IV	33d	Grant (Ill.)	Do

Source: Memos and Incls, BOWD for Chiefs Estimating Agencies, 23 and 26 Sep 40. AG 111(9-24-38) (1) Sec 3.

reflected Marshall's anxiety over the low state of the country's defenses. With the Army numbering about 270,000 men, a big increase in personnel was imperative. Slashing Hartman's estimate, Marshall allowed but two or three months for camp construction instead of three or four. Going still further, he resorted to a risky expedient. To hasten the calling of the Guard, he decided to place some units in temporary tent camps pending completion of winter quarters.<sup>3</sup>

The original timetable for housing Guardsmen and selectees was a construction man's nightmare. The schedule for the Guard camps was particularly rigorous. Counting from 9 September, the

day appropriations became available, Hartman had from one week to three months to ready camps for the Guard divisions. (*Table 7*) He also had to accommodate 132 nondivisional militia units of battalion size or under—22 of them in September, 9 in October, 54 in November, and 47 in December. The schedule for inducting the draftees introduced additional complications. Between 15 October and 15 January the fall quota of 400,000 selectees would go into Regular Army and Guard units. Regulars and Guardsmen could rough it for a time, using field tents and latrines. But, Congress made it clear, draftees could not. Snug barracks, toilets, showers, heating, and electric lights would have to be available when they arrived. In other words, camps would have to be virtually completed. The plan for in-

<sup>3</sup> (1) Memo, G-3 for CofS, 14 Aug 40. (2) Ltr and Incls, BOWD to Chiefs of Estimating Agencies, 26 Aug 40. Both in AG 111 (9-24-38) (1) Sec 3. (3) Memo, G-4 for G-1, 28 Aug 40. G-4/31948.

TABLE 8—REVISED INDUCTION SCHEDULE FOR FALL 1940 QUOTA OF SELECTEES

Date	Strength	Employment
15 November 1940	74,142	To bring Regular Army units (except Air Corps) in southern Corps Areas to war strength and Regular Army units in northern Corps Areas part way to war strength.
5 December 1940	49,765	To bring the First Priority National Guard to war strength.
15 December 1940	65,872	To bring the Second Priority National Guard to war strength.
15 January 1941	112,347	To complete bringing Regular Army units in northern Corps Areas to war strength, to bring the Third Priority National Guard to war strength, and to establish a replacement center for the Armored Force.
15 February 1941	97,874	To bring the Fourth Priority National Guard to war strength and to activate certain inactive nondivisional units of the Regular Army.

Source: Memo, Reybold for TQMG, 12 Sep 40. G-4/31453-18.

ducting the spring quota of selectees would force the Quartermaster Corps to build under most adverse conditions. To be called between 1 April and 15 June 1941, the 400,000 men of this second levy would, with few exceptions, go directly to replacement training centers. Slated to begin in October and November, construction of these centers would span the winter months when outdoor work normally was suspended.<sup>4</sup>

Although Marshall eased induction schedules slightly, he made no corresponding changes in construction deadlines. The Selective Service Act provided that the first "goldfish bowl" drawing would not take place until 16 October 1940 and the first draftees would not report before 15 November. Marshall revised the schedule for the fall quota of selectees accordingly. (*Table 8*) Reports from corps areas indicated that lack of shelter might delay certain Guard inductions. On advice from the commanding

generals, Marshall wrote question marks beside entry dates for some of the Guard divisions. Still, pressure on Hartman did not abate. He could not safely assume that Marshall would postpone calls to any Guard divisions. Nor could he get additional time to prepare housing for the draftees. Reybold, knowing it would be difficult and costly for a contractor first to build for a peace strength division of 13,000 Guardsmen and then, after these troops moved in, to work for several months expanding facilities to take the 5,000 draftees who would bring the division to war strength, ruled out such "piecemeal construction." The date Guardsmen were slated to arrive was, in most instances, the completion date for the entire camp.<sup>5</sup>

Despite the extreme demands made upon him, General Hartman appeared

<sup>4</sup> Memo, G-3 for Marshall, 14 Aug 40. G-4/31453-18.

<sup>5</sup> (1) Watson, *Chief of Staff*, p. 204. (2) Notes of Confs in OCoS, 29, 30 Aug 40. (3) Notes of Conf in Office DCoS, 6 Sep 40. Both in OCS, Misc Confs, 20 May to 25 Sep 40. (4) Memo, SGS for G-4, 30 Aug 40. G-4/31948. (5) Memo, Reybold for Marshall, 30 Aug 40. G-4/31735-1.

confident. To Congressman Taber's question, "The Guard setup may be ready or completed, perhaps by December 1?" he replied, "Yes, sir. Some of [the camps] . . . will be completed before that time."<sup>6</sup> Hartman was under no illusion that he could finish every item of construction on schedule. That was patently impossible. But he could fill minimum requirements in time for mobilization to proceed generally according to plan.

### *The Administrative Setup*

Directing construction operations was an organization patterned on the model that had proved successful in World War I. Now, as then, a central headquarters formulated policies, issued standard instructions, checked on progress, field costs, and accounting, and rendered assistance to forces in the field. From Washington the line of authority ran directly to the job sites. There, Constructing Quartermasters were virtually supreme. In Hartman's opinion, an organization of this type ensured close co-operation between the Construction Division and the projects. Moreover, it eliminated delays which inevitably occurred when work was controlled through regional offices.

One of two headquarters groups charged by Hartman with overseeing construction in the field, Major Violante's Lump Sum Branch was a going concern when the emergency began. Under other names, Building and New Construction, the branch had served since the early

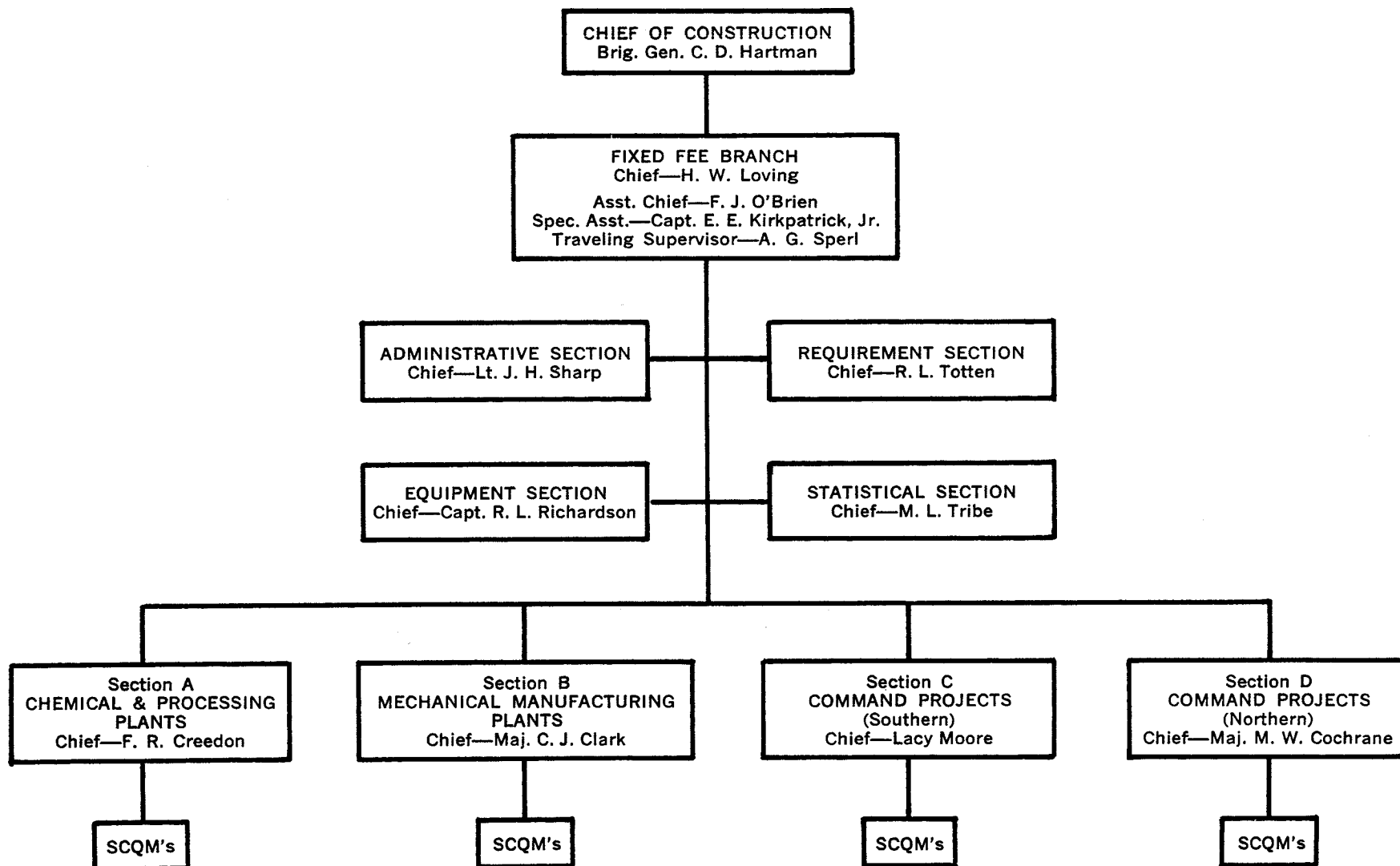
twenties as the principal point of contact between the central office and the CQM's. As the defense program took shape, Violante strengthened the organization for a big endeavor. He chose as his executive Maj. Orville E. Davis, a construction officer since 1920. He called from the field one of the young West Pointers, 1st Lt. William A. Davis, Jr., and drew from the Reserve Corps an able civil engineer, Capt. Donald E. Antes. He assembled a staff of fifty civilians. Successful in obtaining bids for early harbor defense and troop housing projects, he proposed to Hartman that camps, depots, hospitals, and plants be constructed by the lump sum method. A switch to fixed-fee, he contended, was "unwarranted and unjustified."<sup>7</sup> Hartman disagreed. He considered Violante's plan unworkable.

Overshadowing the Lump Sum Branch in size and importance was Loving's Fixed Fee Branch. Established in June 1940, the organization resembled the Building Division of World War I. (Chart 5) Adopting the same plan that Colonel Whitson had employed in 1917-18, Loving appointed a number of Supervising Constructing Quartermasters (SCQM's), each responsible for five or six projects of similar character. He placed groups of SCQM's under lettered sections which specialized in construction of particular types. Chiefs of these sections reported to Loving, who drew assistance from four staff sections, Administrative, Equipment, Requirements, and Statistical. Designed for flexibility, the organization could be readily expanded. As the program grew, more

<sup>6</sup> Hartman's Testimony, 19 Sep 40. In H Subcomm of the Comm on Appns, 76th Cong, 3d sess, *Hearings on Third Supplemental National Defense Appropriation for 1941*, p. 57.

<sup>7</sup> Ltr, Violante to EHD, 25 Sep 57. See also Orgn Chart of Lump Sum Br, 15 Oct 40. EHD Files.

CHART 5—ORGANIZATION OF FIXED FEE BRANCH, CONSTRUCTION DIVISION, OQMG, NOVEMBER 1940



Source: (1) H. L. Loving, History of FF Br, Apr 41. Loving Papers. (2) Orgn Chart of FF Br, 5 Nov 40. EHD Files.

SCQM's could be added and, if need be, whole new lettered sections formed. Hartman gave the Fixed Fee Branch a critical assignment. It would direct all fixed-fee forces in the field. It would serve as his principal inspection agency. Most important, it would be accountable for the progress, quality, and cost of every fixed-fee project.<sup>8</sup>

Like Whitson in 1917, Loving assembled an organization of experienced construction men. Totalling about one hundred persons by 1 November, his staff included but one Quartermaster Regular, Captain Kirkpatrick. The others came from civil life. Robert L. Totten was a prominent civil and mining engineer. Francis J. O'Brien had been a top engineer in the Tennessee Valley Authority. Lacy Moore had been engineer of construction for the Southern Railway System. Frank R. Creedon had been assistant regional PWA director in New York City. Sperl, who became Loving's principal troubleshooter, had served in a similar capacity in World War I. Of the officers, all except Kirkpatrick had come from the Reserve Corps or had received direct commissions. Before joining Loving, Capt. Robert L. Richardson was an equipment dealer and designer, Maj. Maurice W. Cochran was a successful highway engineer and contractor, and Maj. Chester J. Clark was an industrial construction man who had superintended plant projects for General Motors and U. S. Rubber. Highly qualified men occupied many subordinate positions. Of course,

the organization included some who were not so well qualified. The general shortage of construction specialists prevented Loving from filling all openings with experienced men.

Much depended on Quartermaster forces in the field. On fixed-fee projects the position of Constructing Quartermaster was a demanding one. Limited only by general instructions from Washington, the CQM was responsible for the conduct of his job. He dealt with local commanders, coordinated efforts of the constructor and architect-engineer, approved all purchases and subcontracts, and had charge of reimbursing contractors for their expenditures. He had to submit regular progress reports to Hartman and advise him immediately if normal purchasing procedures seemed likely to break down or other troubles threatened. He had to employ every means to complete the project within the funds and time allotted. To carry out his assignment, the CQM needed a competent staff of commissioned officers and a large number of trained employees.<sup>9</sup>

Among Hartman's CQM's, Reservists outnumbered Regulars five to one. Except for a dozen or so retained at central headquarters, virtually all of his career officers were in the field. The ablest and most experienced headed Vicinity offices or directed key jobs. The rest had charge of lesser projects or served as assistants. Other Quartermaster Regulars, experts in supply and transportation with some background in post maintenance, served as construction officers. Ordnance officers became Con-

---

<sup>8</sup> (1) OQMG Office Order 29A, 15 Jun 40. QM 020 (Constr). (2) Tab, Constr Div OQMG, 1 Nov 40, sub: Civ Pers, Washington and Vicinity. Opns Br Files, Pers.

---

<sup>9</sup> OQMG Manual, Supplement to Guide for CQM's, Rev 1940, Covering FF Projects, 27 Aug 40. EHD Files.

TABLE 9—RESERVE OFFICERS ON ACTIVE DUTY WITH CONSTRUCTION DIVISION  
13 DECEMBER 1940

Branch	Lieutenant Colonels	Majors	Captains	1st Lieutenants	2d Lieutenants	Total (by Branch)
Grand Total						686
Total (by Rank)	12	68	261	254	91	
Corps of Engineers	1	19	81	58	14	173
Infantry	2	15	63	64	24	168
Quartermaster Corps	4	17	31	37	32	121
Field Artillery Corps	2	6	41	39	10	98
Coast Artillery Corps	1	5	13	39	8	66
Cavalry		1	18	13	1	33
Ordnance Department	2		4	1	2	9
Signal Corps		1	3	1		5
Chemical Warfare Service		3	1			4
Sanitary Corps		1		1		2
Finance Department			2			2
Special			2			2
Military Intelligence Division			1	1		2
Judge Advocate General's Department			1			1

Source: Memo, OQMG Constr Div for Admin Div, 14 Dec 40. QM 326.21—Assignment of Reserve Officers for Active Duty.

structing Quartermasters at six of the early plants. Still there were scarcely more than 120 Regulars on duty outside Washington. Only by liberal use of his priority on Reserve officers could Hartman staff his projects. By 13 December 686 Reservists had answered calls to construction duty. (*Table 9*) About fifty of these officers remained in the central office, the others went to the field. The Reservists represented a wide range of training and experience. There were contractors, architects, and men from every branch of engineering. There were former CCC officers, road builders, bridge builders, dam builders, power plant specialists, railway construction men, estimators, surveyors, a trucking firm executive, and a hardware merchant. There were men with advanced degrees and men with high school diplo-

mas, men with outstanding qualifications and men whose principal recommendation was their availability.<sup>10</sup> The field officers, Regulars and Reservists, were the best that could be had at the time and, by and large, the best was quite good. "There were some bad eggs," Kirkpatrick said, "but on the whole they were as hardworking, conscientious, and intelligent a group as anyone will ever be able to get together in so short a time."<sup>11</sup>

Efforts to provide Constructing Quartermasters with adequate staffs of civilian assistants were not wholly successful. At the outset hiring was obstructed by the

<sup>10</sup> (1) List of CQM's (Dec 40). Opns Br Files, Weather Rpts. (2) Incls with Memo, OQMG Admin Br for Maj Garrison H. Davidson, 9 Aug 41. Opns Br Files, CQM.

<sup>11</sup> Incl with Ltr, Kirkpatrick to EHD, 2 Jun 53.

Civil Service rule that employees must be drawn from lists of eligibles. These lists yielded few persons with the required skills. Repeated complaints from the field at length caused Gregory to appeal to Commissioner Arthur S. Flemming, who agreed to relax the rule; but district offices of the Civil Service, presumably misled by the vague language of the commission's directives, refused to change their methods. When Constructing Quartermasters continued to complain, Gregory asked the commission to step aside and let Hartman do his own hiring. Flemming refused but made concessions. He agreed to send a special representative to every new project with orders to fill all jobs immediately with or without benefit of Civil Service registers. He also agreed that a Constructing Quartermaster might, in the absence of a special representative, hire whomever he wished with assurance of the commission's eventual approval. Put into practice late in September, the new system virtually eliminated delays in hiring. But it could not supply a full, competent staff for every project. The nationwide shortage of experienced personnel, the comparatively low level of government salaries, the lack of adequate housing near project sites, the brief duration of most construction jobs—these difficulties severely handicapped the work.<sup>12</sup>

Hartman entrusted the main work of construction not to the Quartermaster field but to contractors. Having hired

the best architectural, engineering, and construction firms available, he gave them a large measure of independence. Constructing Quartermasters got orders "to go the contractor's way, so long as fundamental laws are not violated and the Government's interests are protected." In a circular to the field, Kirkpatrick summed up the attitude of the Construction Division:

The contractors selected to cooperate with the Government and contribute their resources, experience, and skill toward the accomplishment of the projects include in their organizations men of unquestionable integrity and patriotism. Their success in the commercial world establishes their abilities. Their judgment along the lines of their qualifications is entitled to the highest of faith and credit. The monetary compensation they will receive is comparatively modest as indicated by the fees allowed. The general intent of the special legislation, the negotiations thereunder, and the contracts is clearly that the contractors shall be made whole for their out-of-pocket expenditures . . . . Any action which conforms to such general intent is entitled to approval.<sup>13</sup>

Although fixed-fee agreements gave Hartman "power of the purse" over his contractors, he did not wish to use that power to dictate working methods to leading architect-engineers and constructors.

### *Preliminary Work at Camp Sites*

Contractors took on their assignments, determined to succeed. The AGC pledged its members to do all that was asked of them and more.<sup>14</sup> Company officials

<sup>12</sup> (1) CSC Circ Ltr 2990, 15 Aug 40. EHD Files. (2) OQMG Circ Ltr 69, 16 Sep 40. EHD Files. (3) Ltr, Flemming to Patterson, 24 Sep 40. (4) CSC Circ Ltr 3045, 26 Sep 40. Last two in Opns Br Files, Pers, Dec 40–Apr 41. (5) Memo, Maj S. P. Simpson, OASW, for ASW, 12 Nov 40. Madigan Files, 100.3 FF Br, Constr Div—Orgn.

<sup>13</sup> OQMG Constr Div FF Ltr 5, 7 Oct 40. See also Constr Div OQMG, Supplemental Guide for CQM's, 27 Aug 40, p. 4; Constr Div OQMG FF Ltrs 1, 24 Sep 40, and 9, 15 Oct 40.

<sup>14</sup> *The Constructor*, July 1940, p. 51.



CLEARING SWAMPS AT CAMP BLANDING, FLORIDA

promised as much. "Our conception of our mission here [at Camp Edwards]," declared a spokesman for the Walsh Construction Company, "is that we are to throw all our talents and resources into the accomplishment of this work."<sup>15</sup> During negotiations for the Blanding contract, Andrew Eken assured Loving: "We will do everything faithfully and with all zest. We are going to get right on this project." Loving had to restrain Eken from starting work before signing

the contract.<sup>16</sup> Other contractors displayed the same spirit. Hurrying to the job sites, builders pressed to get work under way, while architect-engineers hastened their preparations.

The first men on the ground were usually soils engineers and surveyors out "running the gun." As they took topo, sank bore holes, and analyzed samples of soil, these men gave an engineer's appraisal of the sites. Many of the tracts

<sup>15</sup> Ltr, C. D. Riddle to CQM Camp Edwards, 10 Oct 40. 652 (Cp Edwards) I.

<sup>16</sup> Transcript of Negotiations Between Reps of Constr Div and Starrett Bros and Eken, 8 Sep 40. Opns Br Files, Confs.

were excellent—level, well drained, and easy to build on. Others posed only minor problems. Some were clearly undesirable. At one place surveyors had to go in boats to take property corners. Elsewhere reconnaissance parties found rugged terrain, thick vegetation, subsurface rock, swamps, bogs, and boiling sands. The engineers suggested abandoning a number of locations. But time would be lost in moving. So urgent was camp construction that the Army refused, except in the most unusual circumstances, to find better locations and start over again.<sup>17</sup>

The only site abandoned was a 40,000-acre tract near Leon, Iowa. Congress had authorized acquisition of this land in 1939 but had voted no funds for its purchase. Nothing further happened until the summer of 1940, when a corps area board went to investigate. Generally favorable, the board's report listed an abundant water supply among the site's advantages. Feeling that the Army was committed to the Iowa site, General Marshall approved Leon for a 35,000-man cantonment, to be named for General Leonard Wood, even though the corps area commander recommended another, larger site near Rolla, Missouri. Hartman had already let the contracts when he discovered in mid-October that something was wrong. Checking through appraisals in Colonel Valliant's office, he saw that land in south-central Iowa, which had brought \$250 an acre during World War I, was now bringing \$16 an acre. He ordered an immediate investigation by the architect-engineers.

Their preliminary report, completed on 25 October, disclosed a critical shortage of water. Since 1918 the water table had dropped sixty feet. The nearest surface supply was a small stream thirty miles distant that normally ran dry in summer. The cost of impounding enough water for the camp would run to \$1,250,000. On the basis of this report and a similar one from an Engineer Reservist, an Iowan on duty with the Seventh Corps Area, Reybold on 31 October suspended work at Leon. Six days later Marshall transferred the project to Rolla. It was a leap from the frying pan into the fire. The new site was seventeen miles from the nearest railroad. Estimating that a spur track would cost at least \$1,400,000, Hartman suggested placing the camp closer to the main line of the St. Louis and San Francisco.<sup>18</sup> In no mood to entertain such a proposal, Reybold replied, "It is not desired to delay this project by further search for a more suitable site."<sup>19</sup> That settled the matter. But construction was a bigger job than anyone anticipated. Passing through the foothills of the Ozarks and over the Big Piney River, the railroad cost more than three million dollars and took nearly five months to build.<sup>20</sup>

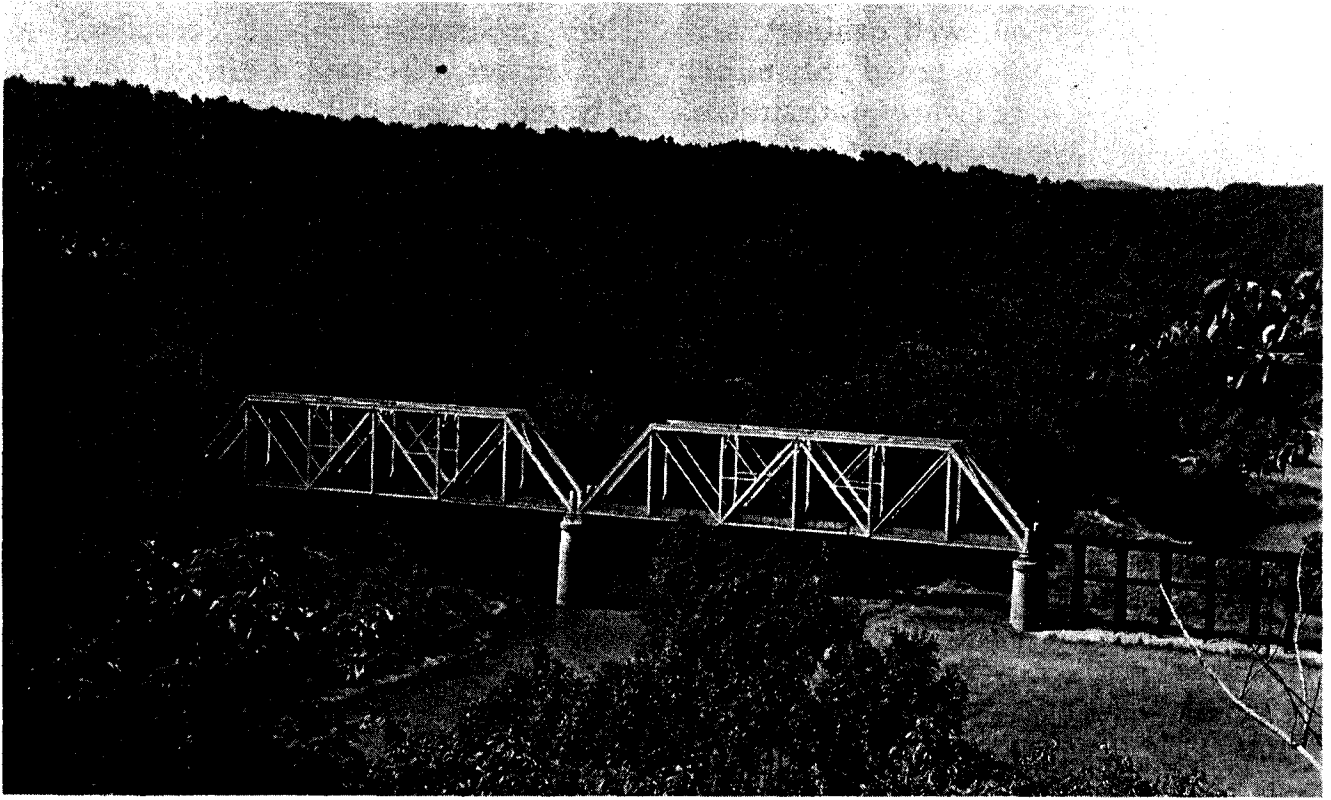
As reports came in from survey parties,

<sup>18</sup> (1) Summary, Constr Div OQMG, n.d., Events Leading Up to Acquisition and Use of Ft Wood, Mo. Opns Br Files, Misc Papers. (2) QM 601.1 (7th CA). (3) Truman Comm *Hearings*, Part 2, pp. 612, 693-703. (4) Statement of Gen Hartman, 5 Jul 55, p. 9. (5) AG 680.1 (7-11-40) (1) Sec 2. (6) G-4/30997. (7) Memo, Hartman for Reybold, 24 Nov 40. 600.94 (Ft L. Wood).

<sup>19</sup> D/S, G-4 to TAG, 27 Nov 40. 600.94 (Ft L. Wood).

<sup>20</sup> (1) Ltr, Alvord, Burdick & Howson to CQM Ft Leonard Wood, Mo., 23 Apr 41. 600.94 (Ft L. Wood). (2) Ltr, OQMG to ICC, 28 Jul 41. 617 (Ft L. Wood).

<sup>17</sup> (1) Rpt, Activities of Constr Div, Jul 40-Nov 41, p. 7. (2) Answers to Questionnaire, Thomas to EHD, 31 May 56. (3) QM 333.1 (Cp Davis). (4) G-4/31981.



RAILROAD BRIDGE OVER BIG PINEY RIVER, CAMP LEONARD WOOD, MISSOURI

architect-engineers started adapting typical layouts to sites. Incomplete and tentative, the typical nevertheless served as good working guides. From them the engineers quickly ascertained the Army's principal requirements. Every unit, large and small, would remain intact. Companies would be grouped into battalions and battalions into regiments. Regimental areas would adjoin a central parade ground. Hospitals would be in isolated spots, away from noise and dirt. Storage depots and motor parks would be near railway sidings or along main roads. To prevent the spread of fire, one-story buildings would be at least 40 feet apart; two-story buildings, 50. Fire-breaks, no less than 250 feet wide, would be spaced at 1,000-foot intervals throughout the length of the camp. Showing grid-platted streets and straight rows of

buildings, the typical envisaged a quadrangular arrangement. Seldom could this pattern be adhered to strictly, and radical changes were often necessary to adjust the standard layouts to local terrain and conditions.

In laying out camps, architect-engineers labored under serious handicaps. Except to the half dozen or so firms with World War I experience, the task was unfamiliar; most had never before attempted a layout involving so many different buildings and such vast acreage. Virtually no lead time was available, for engineers were seldom more than a few paces ahead of constructors. Conditions at some hastily chosen sites precluded good layouts. For instance, the cantonment area at Indiantown Gap, Pennsylvania, was a narrow stretch of rolling land at the foot of a mountain.

The only practical solution was to extend the camp in a straight line for three and one-half miles along the bottom of the slope. To cite another example, at San Luis Obispo, California, where a hilly reservation hugged the Coastal Range, regimental areas had to be scattered to take advantage of stretches of relatively flat ground. Even this arrangement required removal of two million cubic yards of earth.<sup>21</sup> Finally, there was the problem of military commanders versus construction specialists.

By the late summer of 1940 corps area commanders had become virtual dictators in matters of layout. In June General Moore had decided that, in order to save time, questions of layout would be settled on the spot. Accordingly, Hartman told his Constructing Quartermasters to confer with local commanders and try to satisfy their requirements. As soon as a tentative layout was ready, construction would begin. The plan would then come to the Construction Division for review and approval. Under this arrangement, commanders had their way much of the time, for Regular major and lieutenant generals headed corps areas, while captains, majors, and lieutenant colonels, many of them Reservists, served as Constructing Quartermasters. Still the corps area commanders were dissatisfied.

---

<sup>21</sup> (1) Rpt, Slaughter, Saville & Blackburn, Inc., to Chief Constr Div OQMG, 13 Jan 41, Analysis of Deficiencies on Lump Sum and FF Contracts for Constr, pp. 5-6, 11-12. EHD Files. Cited hereinafter as Slaughter, Saville & Blackburn Rpt. (2) Rpt, Constr Div OQMG, n.d., Explanation of Increased Costs at Indiantown Gap. Opns Br Files, Loose Papers. (3) Memo, TIG for CofS, 18 Nov 40. Opns Br Files, IG Rpts. (4) Ltr, CQM Cp San Luis Obispo to TQMG, 19 Feb 41. 600.94 (San Luis Obispo).

They demanded authority to approve or disapprove layouts, and General Moore gave it to them. Hartman protested strongly but in vain. Henceforth, commanders had the power to overrule professional engineers and construction officers. Some commanders used this power to insist on layouts which offered minor training advantages, enhanced the beauty of the camps, or favored long-range interests of the National Guard, but which ignored sound engineering principles. At Meade, Edwards, Forrest, Blanding, and several other key projects, plans imposed by corps area commanders greatly increased construction costs and hindered progress.<sup>22</sup>

Major Groves, making his rounds of the projects, was struck not so much by the commanders' neglect of engineering factors as by their inability to appreciate end-use requirements. At Camp Shelby, Mississippi, he saw a layout which placed units a long way from maneuver areas. If this plan went through, many hours of training time would be lost in moving men back and forth. At Camp Bowie, Texas, he learned that, for no apparent reason, the warehouse area was to be outside the camp proper. At Fort Ord, California, he found that the layout allowed almost no room for expansion. The same was true of other projects in the Ninth Corps Area. In fact, some battalion areas at San Luis Obispo were so small that buildings already authorized

---

<sup>22</sup> (1) WD Ltr AG 600.12 (6-15-40) M-D-M, 15 Jun 40, sub: WD Constr Policy. G-4/31751. (2) Memo, Moore for Hartman, 15 Jul 40. 652 (Ft Knox) I. (3) Ltr, Constr Div to CQM Ft Lewis, 10 Jul 40. 652 (Ft Lewis) I. (4) TWX, TAG to CG Ninth Corps Area, 25 Jul 40. 652 (Ft Ord) I. (5) Memo, Lump Sum Br for Hartman, 3 Oct 40, and notation thereon. Opns Br Files, Rpts of Insp. (6) Statement of Gen Hartman, 5 Jul 55, p. 9.



CAMP SAN LUIS OBISPO, CALIFORNIA

could not be squeezed into them. Largely because of Groves' efforts these mistakes were corrected before construction began. That such mistakes occurred at all was, in his opinion, a strong argument for centralized control.<sup>23</sup>

Handicapped as they were, the Quartermaster Corps and its engineering contractors did a commendable job with

layouts. Camps designed in the summer and fall of 1940 functioned effectively as training centers throughout the war. Some of them served as models in subsequent planning. Produced by engineers of the J. B. McCrary Corporation, who had only the typical for an Infantry brigade to guide them, the layout for Camp Stewart, Georgia, influenced the design of later antiaircraft firing centers. The armored division camp at Fort Benning, laid out by the CQM, Lt. Col. James R. Alfonte, with the help of tank corps officers, became the prototype for projects of its kind. Frequently cited as

<sup>23</sup> (1) Memos, Groves for Gregory, 9 Sep 40, 12 Aug 40, 1 Oct 40, 30 Aug 40. Opns Br Files, Rpts of Insp. (2) Groves Comments, VI, 3-4. (3) Memo, Groves for Gregory, 28 Oct 40. Opns Br Files, Convention in Chicago. (4) Ltr, Groves to OCMH, 22 Jul 55.

the ideal layout, the plan for Camp Robinson, Arkansas, became a widely used model. Black & Veatch, the architect-engineers, had laid out Camp Pike at the same location during World War I. Noteworthy features of their plan for Robinson included a compact arrangement of regimental areas; short roads and utilities lines; a centrally located storage depot; and an unusually good concept for landscaping and site development. Other first-rate plans, particularly those for Bowie, Custer, and Shelby, helped point the way to solutions of troublesome layout problems.<sup>24</sup>

Once they had layouts under way, architect-engineers fell to work on structural plans and blueprints. It was a big undertaking. Camp Edwards, a cantonment, had 1,400 buildings. Including tent frames, Camp Livingston had nearly 9,000. And buildings were but part of the job. Architect-engineers also had to plan water, gas, and electric lines; sanitary sewers and sewage disposal plants; and streets, roads, and railroads. Only by adhering closely to the Quartermaster typicals could they possibly accomplish all this work within the allotted time. Hartman's orders to them emphasized this fact. In adapting standard plans to the locale, they were to recommend changes that would expedite construction, but to avoid drastic, wholesale revisions. Such alterations as were necessary had to be made quickly. CQM's

had authority to approve minor changes, but they had to clear major ones by telephone or telegraph with Washington. Hartman warned architect-engineers to forget perfection. Their principal goal, as he defined it, was not quality but speed.<sup>25</sup>

That much sound planning could be accomplished swiftly was demonstrated at Camp Edwards by the firm of Charles T. Main. Colonel Gunby, a director of the company, was the project's chief engineer. On 12 September, the same day the contract was signed, he moved to the site with his key men and set up offices in barracks belonging to the Massachusetts National Guard. He rapidly increased his staff to 300 men. Pushing work at top speed, he made a few desirable changes in Quartermaster typicals; for example, he relocated hot air ducts to reduce fuel requirements and redesigned foundations to cut down on excavation. He turned the revised typicals over to the Walsh Construction Company, whose draftsmen assembled all details for a given building on a single sheet. After checking these sheets, Gunby sent them to his blueprint department, which worked around the clock to supply construction foremen with working drawings. To expedite planning of communications and utilities systems, he called in expert consultants. So rapid was Gunby's progress that workmen started pouring foundations on 18 September. Moreover, his plans were

---

<sup>24</sup> (1) Memo, Groves for Chief Engrg Br, 10 May 41. Opns Br Files, Cps & Cantons. (2) Truman Comm Rpt 480, Part 2, p. 15. (3) Rpt, OTIG to TIG, 21 Oct 40. Opns Br Files, IG Rpts. (4) Memo, Groves for Gregory, 31 Oct 40. Opns Br Files, Convention in Chicago. (5) Black & Veatch, Cp Robinson, Ark., Landscape Development Plan, Nov 40. Opns Br Files, Land Dev Plan.

---

<sup>25</sup> (1) Rpt, Activities of Constr Div, Jul 40-Nov 41, pp. 148, 164. (2) Circ, Constr Div OQMG, 28 Sep 40, Exterior Utilities. EHD Files. (3) Ltr, Nurse to CQM Cp Forrest, 27 Sep 40, sub: Instrs and Data for A-E's. 652 (Cp Forrest) Part 1. (4) Constr Div OQMG CPFF Ltrs 1, 24 Sep 40, and 9, 16 Oct 40.

so well suited for defense construction that the Army later reproduced them for use at other projects.<sup>26</sup>

For many architect-engineers the going was hard at first. Some started their projects with insufficient knowledge of what they were to do. At Camp Shelby the firm of Lockwood-Greene, confused as to its duties, made a weak beginning. Sent to investigate, Sperl found a small group reproducing Quartermaster typicals, while construction forces marked time waiting for layouts and working drawings. No member of the firm was there to take charge. When Sperl explained what needed to be done, three officials of Lockwood-Greene hastened to the scene, bringing reinforcements with them. The building contractor, the J. A. Jones Construction Company, pitched in and helped the engineers. Soon the job was humming. At other projects the story was much the same. The work was more complicated and extensive than the architect-engineers had anticipated. For example, Koch & Fowler arrived at Camp Bowie believing that architectural work had been virtually completed by Lamphere and his aides only to find that, because of a decision to heat with Texas natural gas instead of coal, building plans had to be revised. In their early phases, projects were frequently delayed for lack of plans, but such delays were usually of short duration. Displaying the abilities that had won them their contracts, architect-engineers quickly mastered the techniques of emergency design and

were soon keeping pace with constructors.<sup>27</sup>

Inexperienced Constructing Quartermasters, like architect-engineers unversed in emergency methods, were apt to make mistakes. In the interest of speed, project officers had assumed an important role in planning. How far typical would be altered was largely up to them. It was a test of their firmness and good judgment, for local commanders besieged them with demands for better facilities and architect-engineers attempted to embellish the Quartermaster's simple designs. Awed by the commanders' rank, impressed by the engineers' professional standing, uncertain of their own authority, many of the new construction officers failed to enforce mobilization standards strictly. An elaborate road net at Camp Bowie and costly utilities lines at Fort Riley were conspicuous instances of overdesign.<sup>28</sup> At Camps Livingston and Claiborne, Hartman's temporary designs underwent such radical changes that, in the words of one inspector, there remained "nothing of a temporary nature about the camps, except the

<sup>26</sup> (1) Compl Rpt, F. M. Gunby, 4 Jun 41, A-E's Rpt on Cp Edwards. (2) Memo, Tatlow for Rcd, 9 Nov 40. QM 333.1 (Cp Edwards) 1940. (3) Ltr, Walsh Constr Co. to Sperl, 13 Aug 56. EHD Files.

<sup>27</sup> (1) TWX, Gregory to CQM Cp Shelby, 21 Sep 40. 652 (Cp Shelby) I. (2) Sperl Interv, 18 Jun 56; Kirkpatrick Interv, 4 Apr 51. (3) Memo, Groves for Gregory, 1 Oct 40. QM 333.1 1939-40. (4) Ltr, Maj John A. Hunt, IGD, to OTIG, 5 Oct 40. G-4/31735 Sec II. (5) Compl Rpt, Cp Bowie, pp. 2, B1-B2. (6) Memo, FF Br for Hartman, 29 Oct 40. QM 600.914.

<sup>28</sup> (1) Ltr, Lump Sum Br to CQM Cp Bowie, 21 Dec 40. 652 (Cp Bowie) I. (2) Ltr, ZCQM Chicago to TQMG, 28 Jan 41. 652 (Cp Grant) I. (3) Compl Rpt, Cp Callan, 30 Aug 41, p. 9. (4) Memo, TIG for CofS, 23 Oct 40. Opns Br Files, IG Rpts. (5) Ltr, Long-Manhattan-Watson, Ft Riley, Kans., to H Comm on Mil Affs, 31 May 41. Opns Br Files, Loose papers.

tentage . . . .”<sup>29</sup> Countless other deviations occurred. Fortunately most of them were slight. Given the speed of the program and the inexperience of many Constructing Quartermasters, there was little Hartman could do to improve control over planning in the field.

While waiting for plans, construction contractors prepared to build. Skeleton staffs from their home offices got preliminaries under way. Personnel men interviewed applicants, surveyed workers’ housing, and arranged transportation to and from the projects. Superintendents formed crews to clear and drain the land, stake out supply roads, and erect temporary office buildings, storage sheds, and timekeepers’ shacks. Project managers checked the facilities of nearby railroads and the condition of neighboring highways. At some isolated projects, gangs started putting in spur tracks and access roads. As contractors sent out calls for workers and orders for materials, two questions were uppermost in their minds: would supplies of labor, materials, and equipment be adequate and would hirings and deliveries keep pace with requirements.

### *Lumber and Other Materials*

“The essence of the preparedness program,” according to the NDAC, was “the getting of an adequate supply of materials of the proper quality in the shortest space of time.”<sup>30</sup> In the early stages of mobilization, requirements for

construction materials were particularly critical. The quantities were huge and the need was immediate. Most important of all building materials was lumber. Cement, plumbing and electrical supplies, and fixed equipment for heating plants, kitchens, laundries, and bakeries also bulked large. A host of other materials—roofing, pipe, sand, gravel, glass, nails, paint, and so forth—went into the building of a camp. Much depended on timely procurement. A shortage of any item might upset completion schedules. A failure in the lumber supply would be calamitous.

Conditions in the lumber market threatened serious trouble. A shortage seemed inevitable unless mills increased production. In September 1940 Hartman aired his view of the situation in an exchange with Representative Louis Ludlow:

Mr. Ludlow. . . . Do you have difficulty in obtaining lumber, especially in the South?

General Hartman. There is some difficulty. The normal production of lumber on a one-shift basis is about 51,000,000 feet a week. We will require something like 550,000,000 or 600,000,000 feet in the next 60 days. We are having a meeting with the mill owners in an endeavor to have them speed up their production by going either on a two-shift or a three-shift basis.<sup>31</sup>

Although records for 1939 showed an output of more than 23 billion feet board measure (FBM) of softwood lumber, the highest since 1929, Hartman’s concern was well founded. The industry had slumped during the first half of 1940. Now, in addition to the Construction

<sup>29</sup> Memo, Constr Div Opns Br Housing Sec Unit B for Chief Housing Sec, 14 Feb 41. QM 333.1 (Cp Claiborne) 1940.

<sup>30</sup> H Doc 950, 76th Cong, 3d sess, 13 Sep 40, *National Defense Contracts*, p. 1.

<sup>31</sup> H Subcomm of the Comm on Appns, 76th Cong, 3d sess, *Hearings on Third Supplemental National Defense Appropriation Bill for 1941*, p. 59.

Division, a dozen federal agencies were calling for lumber. Concentration of camps in the South tended to exclude products of the other great softwood region, the Pacific Northwest, and to throw the burden chiefly on Southern mills. Scarcity, of course, meant high prices. Softwoods had averaged \$20.57 per thousand board feet during 1939. By September 1940 they were bringing as much as \$40 per thousand, and prices promised to go even higher.<sup>32</sup>

It was in this unstable market that Hartman launched what was to be one of the biggest procurement operations of the war—centralized purchasing of lumber. He did so with the backing of Donald Nelson, who agreed that central control was necessary to steady prices and to give priority to jobs with early completion dates. The plan was this: Colonel Jacobson, as chief of Procurement and Expediting (P&E), would solicit offers on the total footage for a project, reserve the lumber with low bidders, and tell the contractor where to buy. Until the system was functioning smoothly, most contractors would continue to procure their own lumber, but prices paid would be subject to Jacobson's approval. Denied funds for an earlier start, Hartman had to introduce centralized purchasing while construction was in progress. Proceeding with necessary caution, he chose Camp Edwards for the initial trial.<sup>33</sup>

The Edwards purchase taught some valuable lessons. On 11 September Jacobson opened bids on 34 million board feet for the Massachusetts cantonment and found that the best offers averaged out to \$41.40 per thousand. The next day he asked successful bidders to start shipping at once. Soon Edwards was swamped with lumber. Madigan, visiting the project at the end of the month, saw 250 freight cars backed up on sidings between Providence and Falmouth, collecting demurrage charges. The contractor, who had three shifts unloading fifty to sixty carloads a day, could not keep pace with incoming shipments. Huge piles of lumber, spotted throughout the project, were creating a fire hazard. The Constructing Quartermaster reported another difficulty: part of the millwork was the wrong size. Before renewing the experiment, Hartman and Jacobson wanted to have more accurate bills of materials and delivery schedules.<sup>34</sup>

By the beginning of October they were ready to try again. Early that month Jacobson invited bids on lumber for four more cantonments: 21,491,420 board feet for Indiantown Gap; 30,100,700 for Meade; 32,246,000 for Devens; and 38,259,791 for Forrest. The response was overwhelming: more than a quarter million separate prices bid. To tabulate and analyze these bids was an appalling task. Borrowing thirty accountants that

<sup>32</sup> (1) *Historical Statistics of the United States*, 1789-1945, p. 125. (2) Memo, Constr Div OQMG for Nelson, 25 Jan 41. 411.1 (Lumber) II.

<sup>33</sup> (1) Memo, NDAC, Hiram S. Brown, for Nelson, 9 Jan 41. WPB-PD File, 411.33 Constr Projs Mil-Jun 40-41. (2) Ltr, CQM Cp Edwards to Sec C, FF Br, 9 Sep 40. QM 411.1 (Cp Edwards) 1940. (3) Telg, TQMG to CQM Ft Bragg, 17 Sep 40. QM 411.1 (Ft Bragg) 1940-41.

<sup>34</sup> (1) Table, Constr Div OQMG (n.d.), Lumber Awards, Totals, and Average Prices (Rev to 31 Jan 41). Opns Br Files, Lumber. Cited hereinafter as Table of Lumber Awards to 31 Jan 41. (2) QM 411.1 (Cp Edwards) 1940. (3) Memo, Madigan for Gregory, 30 Sep 40. Madigan Files, Cp Edwards. (4) Memo, Groves for Gregory, 11 Oct 40. Opns Br Files, Rpts of Insp. (5) Jacobson Interv, 7 Jun 55.

Koke was about to send to the field, Jacobson set them to work. Twenty typists helped them, and even then it took ten days to tally all the bids. By the time the successful bidders received word, stocks on which they had based their bids were depleted. As far as prices went, the results were encouraging: \$40.40 per thousand board feet for Devens; \$39.65 for Indiantown Gap; \$38.42 for Meade; and \$36.97 for Forrest. But clearly the purchasing procedure would not serve. Hartman had either to devise a new method or to turn back procurement to the contractors.<sup>35</sup>

Many favored the latter course. Most contractors were opposed to having the Army buy lumber for them. All the big concerns had their own purchasing departments and regular sources of supply. Nearly every project manager felt he could do the job better than someone in Washington. Loving was among those who questioned the wisdom of continuing centralized purchasing. In his opinion, "the responsible contractors of the South and West had a better idea as to where lumber could be secured than anyone in the Construction Division during the latter months of 1940." General Gregory was another who took a dim view of Hartman's lumber venture. He was "not enthusiastic," Jacobson said wryly. Putting it bluntly, one of Nelson's associates stated that centralized buying of lumber "did not have proper support by the Quartermaster Corps."<sup>36</sup>

It was Nelson who decided what the future course would be. His interest was broader than the military program: if procurement for camps upset lumber prices, the cost of all defense construction would go up. In his opinion centralized purchasing offered the best hope for a stable market. After talking to Hartman and Loving, Nelson agreed to let contractors buy lumber for four more projects. But there he drew the line. He asked that P&E make all other purchases. Quoting the prices Jacobson had paid so far, Nelson maintained that a downward trend already was apparent. As for difficulties with bidding procedures, they could be surmounted. He suggested inviting future bids on one project at a time.<sup>37</sup>

Jacobson found a better solution to the bidding problem. A long-time supply officer whose specialty was clothing, he remembered auctions held after World War I to sell off surplus wool. Each buyer at these sales received a wooden paddle with a number on it. As each lot of wool went on the block, those who wished to bid held up their paddles. The auctioneer's assistants passed among them, collecting slips on which bidders had written their number and price. Clerks then tabulated the offers and award went to the highest bidder. Jacobson saw he could use the same scheme in buying lumber, only bidding would be down instead of up. With the help of Walter T. Deadrick, one of his assistants, and Walter Parlour of the Southern Pine

<sup>35</sup> (1) Table of Lumber Awards to 31 Jan 41. (2) Sherrill, *Lumber in the War*, ch. I, pp. 2-3. (3) Maj. Gen. Eugene Reybold, "They Deliver the Woods," *The Timberman*, June 1943, pp. 10, 12.

<sup>36</sup> (1) Ltr, Loving to EHD, 6 Aug 55. (2) Jacobson Interv, 7 Jun 55. (3) Memo, NDAC Industrial Materials Div, J. W. Watzak, Jr., for W. A. Harri-man, 11 Jan 41. 411.1 (Lumber) II.

<sup>37</sup> (1) Ltr, Nelson to Hartman, 23 Oct 40. (2) Memo, Nelson for Hartman, 18 Oct 40. Both in QM 411.1 (Lumber) 1940. (3) Telgs, Gregory to CQM Pine Cp, 19, 21 Oct 40. QM 411.1 (Pine Cp) 1940. (4) Ltr, Hartman to Nelson, 25 Oct 40. QM 411.1 (Lumber) 1940.

Association, Jacobson planned a series of auctions or "lumber buys" at points throughout the country. Introduced during November 1940, the new procedure was an immediate success. Purchasing costs dropped to almost nothing. Purchasing time was greatly reduced. With adoption of the auction method, opposition to centralized procurement began melting away.<sup>38</sup>

Jacobson had two more battles to fight, one against inaccurate requirements, the other against delinquent suppliers. He would win the first but lose the second. In ordering lumber, he had to rely on quantity surveys prepared by the Engineering Branch. He bought what Lamphere told him, no more, no less. As reports came in from the field, it became clear that the quantities had been greatly underestimated. By mid-October Camp Edwards was short eight million board feet. Soon other projects were calling for large additional shipments. Instructing contractors to buy what they needed in the open market, Jacobson appealed to Lamphere, who put Major Boeckh on the problem. Boeckh discovered that in figuring requirements the Engineering Branch had erred 15 to 20 percent by failing to allow for form lumber, scaffolding, and waste. The mistake was quickly rectified. Meanwhile, Jacobson failed to prevent suppliers from defaulting on their contracts. Most of the mills and lumber yards which had received awards from P&E were fulfilling their commitments, but a few were not. Jacobson took a tough line with the delinquents, holding them to the terms of their agreements. Strong

protests against this policy prompted Gregory to relieve him from P&E on 28 November. Defaults on lumber contracts were to be a problem for some time.<sup>39</sup>

Maj. Milton E. Wilson, who replaced Jacobson in late November, took over a going concern. Since its establishment five months before, the P&E Branch had grown to an organization of sixty people. Adoption of the auction method had been a giant step forward. Centralized procurement seemed to be turning out well. Lumber prices were steadily declining. P&E paid an average of \$39.06 per thousand board feet during October, \$37.18 during November, and \$35.81 during December. Increased production, as mills switched to two and three shifts, undoubtedly contributed to the downward trend. Nevertheless, its proponents gave the bulk of the credit to centralized procurement.<sup>40</sup> Under Major Wilson's direction, P&E would attain undisputed leadership among federal lumber agencies. The pioneer work performed by Colonel Jacobson contributed materially to this success.

The record of the P&E Branch told an incomplete story of lumber in the early months of defense construction. During 1940 thirty-eight projects figured in P&E's purchases. Contractors re-

<sup>38</sup> (1) Jacobson Interv, 7 Jun 55. (2) Sherrill, *Lumber in the War*, ch. I, pp. 3-6.

<sup>39</sup> (1) Jacobson Interv, 7 Jun 55; Boeckh Interv, 21 Jun 59. (2) Ltr, Nat Lumber Mfgs Assn to NDAC, 19 Oct 40, and Incls. QM 411.1 (Cp Edwards) 1940. (3) Telg, Gregory to CQM Pine Cp and other FF projects, 9 Nov 40. QM 411.1 (Pine Cp) 1940. (4) QM 411.1 (Lumber) 1940. (5) QM 411.1 (Indiantown Gap) 1940-41. (6) QM 411.1 (Cp Devens) 1940-42. (7) Ltr, Jacobson to authors, 23 Jun 55.

<sup>40</sup> (1) Table of Lumber Awards to 31 Jan 41. (2) Memo, Watzak for Harriman, 11 Jan 41. (3) Memo, Constr Div OQMG for Nelson, 25 Jan 41. 411.1 (Lumber) II.

mained in exclusive control of lumber procurement at the rest. P&E had bought approximately 587 million board feet by the end of the year. As of 31 March 1941, contractors had purchased almost one billion board feet. Because builders were prohibited from buying large quantities after 6 January 1941, the bulk of the March total represented orders placed during 1940.<sup>41</sup> Although their methods differed, contractors and P&E faced common problems. Both were affected by production difficulties within the lumber industry.

Workers in the lumber mills of Washington and Oregon struck on 1 October. Five days later the West Coast maritime unions walked out. By mid-October tugboat operators and more mill workers had joined the strikers. Returning from a trip to the Ninth Corps Area on the 28th, Groves reported to Gregory, "If they [the strikes] are not settled immediately it will result in serious delay and greatly increased cost in our camp construction." He added, "The supply of lumber in California is becoming very much reduced."<sup>42</sup> The strikes continued. By November West Coast projects were feeling the pinch. The contractors at Fort Lewis despaired of meeting their completion date unless deliveries resumed at once. An arrangement, sponsored by Hillman's office, whereby workers at one of the larger mills went back to work under a temporary agreement, brought some relief to Lewis, but the

situation there continued critical. Meanwhile, lumber prices at San Luis Obispo rose \$6 to \$8 per thousand board feet as a result of the shipping tieup. Cut off from sources of northwestern fir, contractors in California turned to native redwood and uncured lumber. An agreement reached on 4 December sent the maritime unions back to work, but a general settlement with the mill workers did not come until 16 December.<sup>43</sup>

As stocks of seasoned lumber dwindled, buyers moved closer to the saw. Many faced a choice of green lumber or none at all. Hartman took what steps he could to prevent use of substandard material, calling for rigid inspections and tests of moisture content. But there was no way he could prevent stocks of cured lumber from being consumed faster than they could be replenished. The camp program was taking an entire year's cut of long-leaf pine from the southeast area. The kilns and cooling sheds did not exist which could dry all that lumber in a few months. Rumors that green lumber was going into the camps were later confirmed.<sup>44</sup> In January 1941 the Army explained, "The demand on the lumber industry has been so heavy in recent

<sup>41</sup> (1) Table of Lumber Awards to 31 Jan 41. (2) Table, Constr Div OQMG (n.d.), Lumber Purchases, Accrued Totals to 31 Mar 41, Inclusive. Opns Br Files, Lumber. (3) Constr Div OQMG Gen Fld Ltr 40, 6 Jan 41. EHD Files.

<sup>42</sup> Memo, Groves for Gregory, 28 Oct 40. Opns Br Files, Convention in Chicago.

<sup>43</sup> (1) Truman Comm *Hearings*, Part 1, Supplemental Data, pp. 389, 391. (2) Ltr, CQM Ft Lewis to TQMG, 7 Nov 40. 652 (Ft Lewis) I. (3) Memo, Cochran for Loving, 2 Nov 40. QM 333.1 (Cp San Luis Obispo) 1941. (4) Ltr, Peter Kiewit to CQM Ft Lewis, 7 Nov 40. 652 (Ft Lewis) II. (5) Rpt, IGD to TIG, 12 Nov 40. Opns Br Files, Rpts of Insp. (6) Incl, 13 Dec 40, with Ltr, CQM San Luis Obispo to OQMG, 16 Dec 40. 600.914 (Cp San Luis Obispo) I.

<sup>44</sup> (1) Memo, Patterson for Hartman, 26 Aug 40. SW Files, Constr Work 251-650. (2) Ltr, Hartman to Sen Hattie W. Caraway, 7 Oct 40. QM 411.1 (Lumber) 1940. (3) FF Ltr 14, 28 Oct 40. EHD Files. (4) QM 411.1 (Cp Forrest). (5) Ltr and Incls, Constr Div OQMG to C of Engrs, 2 Jan 41. Opns Br Files, Ft Belvoir.

months, that proper drying has been impossible."<sup>45</sup>

Although lumber was the most serious bottleneck, it was not the only one. Hard-to-get items included hospital and kitchen equipment, sheet metal, furnaces, and stoves. Production problems lay at the bottom of most of these shortages. Manufacturers were unable to meet the sudden demand for noncommercial sizes. Scarcities of aluminum and stainless steel restricted output of several items. Even when industry could produce, misunderstandings as to who was buying what occasionally upset delivery schedules. Along with the Construction Division and its contractors, depot Quartermasters, post commanders, and the Surgeon General were purchasing for the program. This situation inevitably produced confusion and delay. To make matters worse, a number of contractors placed orders with jobbers who promised early delivery dates but failed to meet them. Answers to questionnaires circulated by the AGC indicated the extent to which materials shortages were affecting the program. Fifty-seven percent of the contractors included in a poll of 15 November reported deliveries behind schedule. A poll taken ten weeks later showed 65 percent delayed for lack of one material or another.<sup>46</sup>

### *Construction Equipment*

Between fifty and sixty million dollars' worth of construction equipment was

required for the camp and cantonment projects. Filling this requirement was a difficult thing to do. Principal contractors could furnish only a fraction of the needed equipment. Big general contracting firms seldom maintained extensive plants. A few bought equipment for each new project and sold it when the job was over. Most relied on rented machinery. To purchase the necessary equipment was out of the question. Hartman had no funds for this purpose. Moreover, manufacturers could not promise early deliveries and dealers were reluctant to sell irreplaceable stocks. In these circumstances, Hartman had but one recourse—to rent from distributors, dealers, small contractors, and other third parties.

Adopting a method that had proved successful in World War I, he agreed to reimburse contractors for the cost of leasing third-party equipment. The fixed-fee contract set forth the conditions that would apply. Equipment must "be necessary for the proper and economical prosecution of the work." It must be "in sound and workable condition." Agreements for third-party rentals must follow a form prescribed by the Secretary of War. They must include the same recapture clause as the principal contract. Rental rates and other terms must meet the approval of the contracting officer.<sup>47</sup> In his instructions to the field, Hartman made Constructing Quartermasters responsible for approving valuations and rental rates. He promised a schedule of allowable rents and a standard form of agreement at an early date. Meanwhile, he told contractors to get

<sup>45</sup> Ltr, Constr Div OQMG to Nelson, 25 Jan 41. 411.1 II.

<sup>46</sup> (1) Memo, Wilson for Opns Br, 9 Apr 41. Opns Br Files, Questions and Answers for Truman Comm. (2) FF Ltr 6, 24 Sep 40. EHD Files. (3) FF Ltr 30, 10 Dec 40. EHD Files. (4) Memo, Chief Constr Div for Groves, 29 Jan 41. Opns Br Files, Projects Behind Schedule.

<sup>47</sup> FF Form 1, approved by ASW, 12 Jul 40, art. II, par. 1c.

started. As soon as they could determine their requirements, they were to make temporary arrangements with third-party owners and begin assembling equipment.<sup>48</sup>

When Captain Richardson reported to Loving on 10 September 1940, fleets of equipment were already moving to the job sites. Contractors were making their own terms with third-party renters. The Mechanical Equipment Section was a name on an organization chart, nothing more. Hurriedly assembling a small staff, Richardson buckled down to work. Within a week or so, a schedule for third-party rentals, based on the contractors' schedule but including an allowance for profit, was on its way to the field. Before the month was out, all the big machinery companies had been canvassed and lists of equipment for rent had been compiled. During October, Richardson, with help from the Legal Branch, revised an agreement used in peacetime on purchase and hire projects for use in the current emergency. Two significant features of the new form were the required recapture clause and a provision making owners responsible for major repairs. Upon its approval by Assistant Secretary Patterson, Richardson rushed the agreement to Constructing Quartermasters with instructions to use it on all future third-party rentals and to bring outstanding leases quickly into line.<sup>49</sup>

As it turned out, third-party rents were determined not by the Quartermaster schedule but by the law of supply and demand. At the beginning of October only eighteen million dollars' worth of used equipment was available throughout the country. New machinery was hard to come by. Rents were beginning to soar. On the 11th Richardson, in an effort to hold leasing costs within bounds, told contractors to ask for bids. Bidders would set a valuation on their equipment and quote a monthly rate, but with machinery at a premium, bidding was seldom competitive. Lively competition did exist, but it was among contractors struggling to attract equipment to their projects rather than among owners anxious to rent. Third-party agreements became so profitable that contractors pressed for higher rates on their own equipment. One of the joint venturers at Fort Belvoir went so far as to rent some of his equipment to the contractor at Meade. Where competition failed, the recapture clause became the sole bulwark against spiraling rates, for the larger the monthly rent the sooner would the equipment belong to the government.<sup>50</sup>

Owners were understandably hostile toward recapture. Small construction firms could not afford to lose their stock in trade. Dealers and distributors, unsure of future deliveries, hesitated to risk capture. The fact that the Navy did not adopt a similar provision made the

<sup>48</sup> OQMG Manual, Supplement to Guide for CQM's, Rev 1940, Covering FF Projects, 27 Aug 40, 4-5, 14-15.

<sup>49</sup> (1) Testimony of Capt Richardson, 29 Jul 41. In *Truman Comm Hearings*, Part 6, pp. 1667-70, 1678-79, 1676. (2) Memo, Richardson for Violante, 8 Oct 40. QM 022 (Constr) Oct 40-Dec 41. (3) *Truman Comm Hearings*, Part 6, Exhibit 91, Equipment Rental Agreement, pp. 1886-89.

<sup>50</sup> (1) Richardson's Testimony, 29 Jul 41. In *Truman Comm Hearings*, Part 6, p. 1679. (2) Memo, Richardson for Sec Chiefs FF Br, 11 Oct 40. 481 Part 1. (3) Ltr, FF Br to CQM Cp San Luis Obispo, 25 Oct 40. QM 481 (Cp San Luis Obispo) 1940-41. (4) Constr Div OQMG FF Ltr 35, 17 Dec 40. EHD Files. (5) *Truman Comm Rpt* 480, Part 2, pp. 26-27, 29.

Army's bargaining position all the more precarious.<sup>51</sup> Although Hartman assured owners that they would receive fair treatment, many refused to rent on his terms. Some offered to lease equipment only in blocks which included obsolete and useless items. Others demanded subcontracts. Those who bid on a recapture basis generally set valuations high enough so that recapture would bring them a tidy profit.

Quartermaster officers, trying desperately to speed construction, occasionally joined owners and contractors in opposing recapture. Insistence on a provision that inflated rents, discouraged bidders, and might, in the end, put many small contractors out of business seemed unwise to them. One Constructing Quartermaster favored striking the recapture clause from the agreement. Another promised to release equipment before it reached the recapture stage. A third permitted owners to jack up valuations as much as 60 percent above retail list prices, thus insuring that recapture, if it occurred at all, would be highly profitable. Major Cochran of the Fixed Fee Branch threw caution to the winds and openly scrapped the provision. Cochran, whose section oversaw seventeen projects, including such important camps as Edwards, Meade, San Luis Obispo, Indiantown Gap, and Devens, boasted of his ability to cut red tape.<sup>52</sup> At a meeting with subordinates on 11 Novem-

ber, he announced: "We are having difficulty with the recapture clause in equipment rental. Throw it away." He went on to explain:

Take the man who owns a \$10,000 shovel or special equipment. He is not interested in selling that equipment. He cannot buy any more now. The shovel people are three months behind on deliveries. If you are in a hurry, take one bid. Use your judgment and get a fair price. Speed is the essential thing. This money is being spent for winter construction. It costs money to go to war, boys. Two or three weeks on a training schedule of men may be a serious proposition.<sup>53</sup>

In discarding recapture, Cochran gained a temporary advantage for his projects but blunted Richardson's drive to standardize rental agreements.

Despite complications, renting got results. Fixed-fee contractors succeeded in leasing large amounts of equipment. To illustrate, Walsh at Edwards leased 1,132 items; Starrett Brothers and Eken at Blanding, 2,500. True, renting created problems for which there were no easy solutions. True, too, its cost was high. Nevertheless, it offered the quickest method of assembling equipment and the best means of controlling distribution during a period of shortage.<sup>54</sup>

### *Labor*

Completing the camps on schedule depended heavily on the achievement of three major objectives in regard to labor. First, every project had to have

<sup>51</sup> Navy Department, Bureau of Yards and Docks, *Building the Navy's Bases in World War II* (Washington, 1947), I, 104.

<sup>52</sup> (1) Transcript of Verbal Rpt, CQM Cp Edwards to FF Br, 21 Oct 40. 600.914 (Cp Edwards) I. (2) Ltr, L. B. McLeod to Starrett Bros and Eken, 8 Jan 41. 481 (Cp Blanding) I. (3) QM 481 (Cp San Luis Obispo) 1940-41. (4) Statement of Maj Cochran, 28 May 41. Opns Br Files, Confs.

<sup>53</sup> Min of Mtg, Cochran and CQM Reps, 11 Nov 40. Quoted in 2d Ind, CQM Cp Grant to OQMG, 14 Jan 41, on Ltr, CQM Cp Grant to OQMG, 19 Dec 40. 481 (Cp Grant) I.

<sup>54</sup> Ltr, Constr Div OQMG to Truman Comm, 11 Jun 41. 481 Part 1.

enough workmen. Second, production had to be continuous. Last, and to some extent least, came considerations of cost. Hours of work, wage rates, and efficiency had to be watched carefully so that neither time nor money would be wasted. Attaining these objectives was primarily the contractor's responsibility and was in fact an important part of the service for which he received his fee. Nevertheless, the Construction Division was ultimately accountable for completion of the program and for its cost. When progress and costs were affected, and only then, the division took an active role in labor relations and management.

The group within the Construction Division most active in labor matters was the Labor Relations Section of the Administrative Branch. Established in August 1940, the section had the duties of obtaining wage rates from the Department of Labor and making certain that contractors paid at least these rates, as required by the Bacon-Davis Act. In addition, it supervised labor, dealt with labor representatives, and co-operated with interested federal agencies. Heading the organization was Leslie E. Brigham, a former professor of hydraulics who was identified neither with the unions nor with industry. The "old professor," as he styled himself, considered his mission threefold: "facilitating the greatest possible speed in construction; providing the greatest possible economy both in money and manpower; [and] getting the job done with the least possible friction and dispute."<sup>55</sup>

Between July 1940 and the end of the year, the number of men employed on military construction projects rose

from 5,380 to 396,255. (*Table 10*) Although some were paid by WPA and some directly by the Army, the vast majority of these workers were contractors' employees. Project forces grew with impressive speed. Camp Edwards, which started out with 165 men shortly after Labor Day, attained its peak employment of 18,800 early in November. By December there were some 9,000 men on the payroll at Camp Robinson, 13,800 at Blanding, 14,900 at Claiborne, and 19,000 at Forrest. Where did all these workers come from? A nationwide survey in the summer of 1940 turned up only 366,000 unemployed workmen with any skill in the building trades.<sup>56</sup>

As far as the Construction Division was concerned, a contractor's recruiting methods were his own affair. He might advertise, post notices, get in touch with employment agencies, and choose among applicants who presented themselves at the gate; or he might call upon union business agents to send him men. General contractors in the South and Southwest, still largely open shop territory, preferred the first method; those in other sections of the country, the second. For big contractors in the North, the East, and the Pacific coastal area, relations with labor had come increasingly to mean relations with the building trades unions of the American Federation of Labor. Efforts of the CIO to organize construction workers had met with little

---

<sup>55</sup> (1) Table, prepared by the Bureau of Labor Statistics, Dept of Labor, Average Employment on Selected Mil Constr Projects, Monthly, By Geographical Area. EHD Files. (2) Richard J. Purcell, Labor Policies of the National Defense Advisory Commission and the Office of Production Management, May 1940 to April 1942 (WPB Spec Study 23, 31 Oct 1946), pp. 67-68. Cited hereinafter as Purcell, Labor Policies.

<sup>56</sup> Rpt, Brigham to Bennett, 30 Sep 40. EHD Files.

TABLE 10—NUMBER OF PERSONS EMPLOYED ON PROJECTS UNDER  
JURISDICTION OF CONSTRUCTION DIVISION, OQMG  
JULY–DECEMBER 1940

Month	Average
July.....	5,380
August.....	7,172
September.....	19,103
October.....	78,855
November.....	255,592
December.....	396,255

Source: Constr PR 9, 26 Feb 41, p. 91.

success. Affiliated with AFL were nineteen autonomous craft organizations, each with its own officers, initiation fees, dues, working rules, and regulations. Holding them together was the Building Trades Department, AFL, headed since August 1939 by John P. Coyne. For the year 1939 the building trades unions reported a combined average membership of 822,593.<sup>57</sup> With hundreds of thousands of defense jobs open, the unions could not afford to be inactive. The preparedness program presented them with a challenge and an opportunity. The circumstances dictated an organizing drive which would bring pressure on both the contractors and the Construction Division.

Eager to assume responsibility for referring workers to defense projects, the unions professed to have not only the men required but also the machinery for referring these men when and where they were needed. "To set up within our building-trades department a great de-

fense-employment exchange was not difficult," President William Green of the AFL explained in 1941, "for our international unions already serve their membership as Nation-wide employment offices."<sup>58</sup> A link with the United States Employment Service (USES) strengthened the unions' position as referral agencies. When the defense program began, nearly six million unemployed were enrolled with USES. The NDAC wanted this roll used "as far as possible" in filling defense jobs.<sup>59</sup> During the summer of 1940 the unions worked out agreements with USES: unemployed members would register at USES offices, which would try to "preserve the established union placement channels."<sup>60</sup> Potential rivals thus became partners. But arrangements with USES did not automatically assure AFL that all construction workers would be channeled

<sup>57</sup> *Report of Proceedings to the Thirty-Fourth Annual Convention of the Building and Construction Trades Department, American Federation of Labor*, November 1940, p. 167. Cited hereinafter as Bldg Trades Dept, *Proceedings*, Nov 1940.

<sup>58</sup> Statement of William Green, 14 Jul 41. In H Select Comm Investigating Nat Def Migration, 77th Cong, 1st sess, *Hearings*, Part 16, p. 6414. Cited hereinafter as Nat Def Migration *Hearings*.

<sup>59</sup> (1) Purcell, *Labor Policies*, p. 68. (2) H Doc 950, 76th Cong, 3d sess, 13 Sep 40, pp. 2-3.

<sup>60</sup> Nat Def Migration *Hearings*, Part 16, pp. 6415-16.

through its unions. Only when a contractor agreed to employ union members exclusively would USES clear all workers for a project through AFL locals.<sup>61</sup>

Hiring at defense projects came increasingly under union control. In a strong position to begin with, the unions fought to extend their influence. Strikes and threats to strike, refusals by union members to work with nonmembers—all the usual pressures were brought to bear.<sup>62</sup> Benefiting from policies of the Roosevelt administration and from the emergency situation, the AFL advanced toward its goal of unionizing all military construction jobs. A study of 78 representative fixed-fee projects, made in March 1941, revealed that only 6 were operating strictly on an open shop basis. Twenty-two required workers in some crafts to belong to unions. Thirteen operated as preferential shops, which meant that union members received first call on jobs and nonmembers had to join a union after they were hired. Thirty-seven projects, nearly half the total, operated as closed shops, which meant that a man had to be a union member before he was even considered for em-

ployment. Of the 78 principal contractors on these projects, only 30 had regularly operated closed or preferential shops before the defense program began. That 50 were operating such shops in March 1941 was indicative of the unions' progress during the early months of the emergency.<sup>63</sup>

Military construction projects attracted hordes of applicants. As contract awards became public, as calls went out for workers through newspapers and radio, as "caravans" of sound trucks toured the countryside broadcasting offers of employment, thousands flocked to the job sites. Sperl, detailing the success of caravans in recruiting workmen in rural Mississippi and Kentucky, said in his clipped way: "Got thousands—barefoot and like-a-that—but thousands—old jeans, no shoes, needed haircuts—but got them in working."<sup>64</sup> Considerable interstate migration occurred. Fort Bragg in North Carolina drew labor from South Carolina and Georgia; Camp Jackson in South Carolina, from North Carolina and Georgia. Maryland, Ohio, and Louisiana reported a large influx of people from nearby states. There were many more applicants than jobs. At Camp Edwards, 9,000 men were turned away; at Shelby, 11,000; at Meade, 29,000; and at Bragg, 36,000. All the other big projects had similar surpluses.<sup>65</sup> Whether in a densely populated area

<sup>61</sup> (1) Testimony of James Doarn, Missouri State Employment Serv, 26 Nov 41. In *Nat Def Migration Hearings*, Part 23, pp. 8896–99. (2) Rpt of William L. Hutcheson, President, *Proceedings of the Twenty-Fourth General Convention of the United Brotherhood of Carpenters and Joiners of America*, December 9–16, 1940, p. 42. Cited hereinafter as *Carpenters and Joiners Proceedings*, Dec 40. (3) Incl, 8 Feb 41, with Ltr, Pres Int Brotherhood of Electrical Workers to OQMG, 10 Feb 41. 600.1 (Wolf Creek OP) (Labor).

<sup>62</sup> (1) Table, prep by EHD, Work Stoppages on Mil Constr Jobs, Jun 40–Dec 40. EHD Files. (2) Ltr, Sen H. C. Lodge, Jr., to TQMG, 25 Oct 40. 600.1 (Cp Edwards) (Labor) I. (3) Memo, Groves for Hartman, 7 Nov 40. 600.1 (Indiantown Gap) (Labor) I. (4) Ltr, CQM Cp Lee to TQMG, 10 Nov 40. 600.1 (Cp Lee) (Labor) I. (5) *Carpenters and Joiners Proceedings*, Dec 40, p. 42.

<sup>63</sup> Incls with Memo, Statistical Unit Labor Rel Sec Constr Div OQMG for Chief Labor Rel Sec, 28 Apr 41. OCE LRBr Files.

<sup>64</sup> Sperl Interv, 18 Jun 56.

<sup>65</sup> (1) Statement of Fred R. Rauch, Acting Commr, WPA, 6 Dec 1940. In *Nat Def Migration Hearings*, Part 9, pp. 3626–27. (2) Ltrs, CQM's at various projects to Rep John H. Tolan, Chm H Select Comm to Investigate the Interstate Migration of Destitute Citizens, Mar 41. OCE LRBr Files.

or in the backwoods, a defense project never lacked for applicants. As far as quantity was concerned, contractors had more than enough labor.

A hail of grievances soon erupted, mainly because a majority of the job-seekers were not AFL members. Some belonged to the CIO. Some were Negro craftsmen barred from the building trades unions because of their race. A great many were "barnyard mechanics," "hatchet and saw carpenters," handy-men, people with little or no skill, destitute migrants searching desperately for work, and local residents out for big construction wages. With the AFL exerting broad control over hiring, friction was bound to develop. The building trades unions came in for much bitter criticism. Home folks complained of being edged out by union hooligans from distant places. Jobless Negroes blamed the unions for their failure to get work. CIO members protested that they could not ply their trades unless they went over to the AFL. Newspapers throughout the country carried reports that the unions were levying exorbitant fees for the privilege of working. Many persons were convinced that "union racketeers" had taken over the Army's construction program and were running it in anything but a patriotic manner.

*Racket* and *shakedown* were terms frequently applied to the exaction of union fees and dues from workers at defense projects. Scattered figures give an idea of what a workman had to pay to join a union local. The initiation fee for carpenters was \$35 at Pine Camp, \$50 at Blanding, and \$80 at Dix. The plumbers union charged \$50 at McClellan and \$200 at Lawson General Hospital. At Belvoir the electricians charged \$300.

In addition, the unions collected dues, generally under \$5 per month. There were many seeming abuses. At project after project men paid their money, joined a union, and went to work, only to be fired a short time later as incompetents. Several locals increased their fees. A number refused to honor membership cards of other locals, demanding a sizable sum for permitting "outsiders" to work within their jurisdiction. Receipts of some locals reportedly ran into hundreds of thousands of dollars; where the money went was a mystery. Complaints poured into Washington. The press spotlighted alleged abuses. Public resentment ran high. Concerned, top union leaders joined officials of the War Department and NDAC in bringing pressure on locals.<sup>66</sup> But reform was slow in coming.

The project most severely hurt by the unions' organizing drive was Blanding, a closed shop job in an open shop state. Starrett Brothers and Eken had long been union contractors. When they moved south in September 1940 to build the camp, they took with them a following of some 2,000 men—superintendents, foremen, and workmen—all trade unionists. Members of this group automatically assumed control over hiring and firing. Pressure on nonunion craftsmen to join up encountered stiff resistance. Blanding was torn by dis-

---

<sup>66</sup> (1) Data on union fees and dues compiled in EHD. (2) 600.1 (Labor) (Initiation Fees). (3) Memo, Brigham for Bennett, 8 Nov 40. QM 600.1 (Labor). (4) Interv with James P. Mitchell, 5 Nov 49. (5) OCE Legal Div Files, Press Clippings, Aug-Dec 40. (6) Tel Conv, Brigham and Coyne, 3 Dec 40. OCE Legal Div Files, Bldg & Constr Trades Dept, 8/40-3/43. (7) Address by Joseph D. Kennan, 13 Nov 40. Bldg Trades Dept, *Proceedings*, pp. 192-93. (8) Memo, OASW, John H. Ohly, for Huntington Thom, 10 Jan 41. Ohly Files, Labor-Constr Policies & Problems 1.

sension, as organizers from New York told local workmen to pay up or get off the job and Floridians damned the Yankees and their unions. Morale suffered, and production fell.<sup>67</sup> By late October the job, reportedly, was "progressing 25 percent slower than it should due to interference of union activities."<sup>68</sup> Efforts to remedy the situation were largely unsuccessful. To Maj. Leander Larson, the CQM, the reason for this failure was obvious. He questioned whether any other closed shop contractor would have fared better at Blanding.<sup>69</sup> Dresser, reviewing the record of the Construction Advisory Committee, termed the selection of a New York concern for work in Florida as "one of our chief mistakes."<sup>70</sup>

Taking a neutral position on the question of union control, the Construction Division made no attempt to dictate policy to either the contractors or the unions. Hartman refused to "dictate or express any preference or negotiate in any way to see that the job was made either union or open shop."<sup>71</sup> He left the decision to the contractor. Moreover, he made no attempt to interfere in union affairs. "You will appreciate," Gregory wrote Senator Lodge, "that the rules under which the unions operate are entirely a matter within their own jurisdiction."<sup>72</sup> Unions could not set up offices

within projects or collect dues during working hours. Union organizers were barred from job sites. But, Gregory emphasized, "Activities of these people off the reservation are no concern of this office."<sup>73</sup> One fortunate effect of this hands-off policy was that Brigham was spared involvement in controversies over the unions. Problems of wages and hours demanded his full attention.

Strong monetary inducements were necessary to draw skilled workers to jobs which were otherwise unattractive. Camp projects offered only a few months' employment. Most were far from centers of population. Furthermore, miserable living conditions often prevailed in the vicinity of the sites. Conditions in the little town of Tullahoma, near Camp Forrest, Tennessee, illustrated the sort of thing a workman might find. At Tullahoma, whose normal population was 5,100, an influx of 15,000 construction workers created "a health hazard almost beyond description."<sup>74</sup> "Many employees live in crackerbox shelters built on small broken-down trucks and automobiles," an inspector reported. "Many house owners in the town rent bunk space in basements. In some cases, men spend the night in sheltered doorways."<sup>75</sup> Another visitor observed streets littered with garbage and human excrement. The Constructing Quartermaster, fearing an outbreak of typhoid or smallpox, ordered mass vaccinations and had garbage removed and streets

<sup>67</sup> (1) Ltr, Starrett Bros and Eken to Truman Comm, 23 May 41. Opns Br Files, Loose Papers. (2) OCE LRBr Files, Cp Blanding to 2/11/41.

<sup>68</sup> Ltr, 1st Lt. R. C. Haas to Lt. E. C. Parks, Jr., 25 Oct 40. 600.1 (Cp Blanding) (Labor) I.

<sup>69</sup> Incl with Ltr, Larson to Gregory, 4 Jan 41. QM 652 (Cp Blanding) 1941.

<sup>70</sup> Dresser Interv, 2 Apr 57.

<sup>71</sup> Ltr, CQM Cp Lee to TQMG, 10 Nov 40. 600.1 (Cp Lee) (Labor) I.

<sup>72</sup> Ltr, Gregory to Lodge, 9 Nov 40. 600.1 (Cp Edwards) (Labor) I.

<sup>73</sup> Telg, Gregory to CQM Ft Warren, 3 Dec 40. 600.1 (Ft Warren) (Labor) I.

<sup>74</sup> Ltr, Carey to Harrison, 30 Nov 40. WPB-PD File, 411.33 Constr Projs—Mil—Jun 40-41.

<sup>75</sup> Rpt, Maj Hunt, IGD, to TIG, 11 Dec 40. QM 333.1 (Cp Forrest) 1940-41.

cleaned at government expense.<sup>76</sup> To be sure, communities larger than Tullahoma provided better accommodations, but workers still had to expect high prices, overcrowding, and other inconveniences.

The maximum wage rates that Hartman authorized fixed-fee contractors to pay—the minimum Bacon-Davis rates set by the Department of Labor—had less appeal for craftsmen than for unskilled workers. Early reports from the field disclosed widespread difficulties in recruiting artisans. The CQM at Bragg complained that his project was not attracting enough skilled workmen. The CQM at McClellan despaired of getting adequate numbers of craftsmen at Labor Department rates. Sheet metal workers protested the wage at Fort Riley. Bricklayers spurned the pay at Camp Shelby as “too low.”<sup>77</sup> At Camp Edwards, on the southern end of Cape Cod, the situation was critical. On 28 September Madigan telephoned Hartman from Boston: “You have about 900 carpenters, 930 to be exact, at Camp Edwards. You can use about 1,000 or 1,500 more . . . . We have got to get something done about carpenter rates if you are going to get that camp finished.”<sup>78</sup> The CQM at Edwards, like others in his predicament, blamed the lack of carpenters on “inadequate and

ridiculous” wage rates established by the Department of Labor.<sup>79</sup>

Much trouble resulted from the Labor Department’s practice of confining its wage rate studies to the immediate vicinity of the projects. On many jobs in small towns or rural areas, the department’s rates were too low to attract craftsmen from distant places. At Edwards, for example, the department “set up wage scales, which, while entirely pertinent to existing local conditions, where an occasional summer cottage was the limit of construction operations, offered no attraction whatsoever to outside labor.” Skilled workmen in Boston were naturally unwilling to go to Cape Cod for less money than they could earn at home.<sup>80</sup> Additional complications arose whenever the Labor Department established higher rates for a new project than those being paid on a going job nearby. Then, workers rapidly deserted the old project for the new. Pointing to these difficulties, Coyne, Hillman, and others with prolabor views argued that Hartman ought to abandon his attempt to “freeze the minimum wages into maximum wages.”<sup>81</sup>

The Construction Division’s solution to the problem was less drastic. Where Labor Department rates clearly lacked sufficient drawing power, it authorized contractors to pay higher rates. Anxious to avoid unnecessary increases, it waited until a contractor complained about shortages of workmen before considering new rates for his project. Then, it weighed his recommendations carefully. If he

<sup>76</sup> (1) Ltr, OCQM Cp Forrest to Brigham, 15 Nov 40. OCE, LRBr Files, Cp Forrest. (2) Groves Comments, IV, 8.

<sup>77</sup> (1) Telg, CQM Ft Bragg to TQMG, 17 Sep 40. 600.1 (Ft Bragg) (Labor) V. (2) Memo, Brigham for FF Br, 30 Sep 40. 600.1 (Ft McClellan) (Labor) I. (3) Incls, 27 Sep 40 with Memo, Brigham for Violante, 2 Oct 40. 600.1 (Ft Riley) (Labor) I. (4) Ltr, Kirkpatrick to CQM Cp Shelby, 30 Sep 40. 600.1 (Cp Shelby) (Labor) I.

<sup>78</sup> Tel Conv, Madigan and Hartman, 28 Sep 40. OCE LRBr Files, Cp Edwards, Gen Corresp.

<sup>79</sup> Memo, Cochran for Loving, 2 Nov 40. 600.914 (Cp Edwards) I.

<sup>80</sup> *Ibid.*

<sup>81</sup> Memo, Simpson for Patterson, 16 Oct 40. Madigan Files, 102 Labor.

could demonstrate his inability to recruit enough workmen at the current rate, he received an increase. He did not need to show that he had gone to extraordinary lengths to secure workers. But he did have to prove that other contractors in the same general locality were paying more. This system enabled the Construction Division to grant justifiable increases and at the same time to maintain its overall ceiling on wages. Nearly every fixed-fee job received a boost in one or more crafts, but few received across-the-board increases.<sup>82</sup>

Overtime premiums, not basic wage rates, were Brigham's biggest headache. As already noted, principles adopted by NDAC required the payment of premiums in accordance with "local recognized practices" for more than eight hours a day or forty hours a week and for work performed on Saturdays, Sundays, and holidays.<sup>83</sup> On 12 September 1940, the day before the President promulgated this policy, Major Jones and his assistants in the Legal Branch completed a memorandum entitled *Notes on Hours of Labor*. This document, though technically correct, implied a policy contrary to NDAC's in two important respects. It stated, first, "There are no statutory limitations (except overtime for over eight hours) as to work on Saturdays, Sundays, or holidays," and, second, "There are no statutory limitations as to the number of hours . . . employees may work per week or per

month."<sup>84</sup> Although the Construction Division did not receive a copy of Patterson's memorandum of 27 September directing adherence to NDAC policy, Brigham knew of a letter from Stimson to Hillman promising compliance.<sup>85</sup> He also knew that Coyne had written to all local building trades councils, calling attention to the policy.

Convinced that the War Department should not be forced in an emergency to pay rates looked upon as prohibitory in ordinary times, Brigham refused to accept the "local practices" formula as final. On 7 October he pointed out to Bennett that Hartman had ordered projects to work forty-eight and fifty-six hours a week apparently on the assumption that straight-time wages would be paid. That assumption, Brigham indicated, might yet prove correct. Suggesting that public opinion would not support union demands for excessive overtime, he asked permission to negotiate with AFL leaders, to try to win them over to "a 40-hour week and 8-hour day for any one man, continuous operation through Saturdays, Sundays, and holidays, at straight time, payment of time and one-half for overtime, as required by law, and sufficient shift work at a reasonable increase in rates, as may be required to complete the job on time."<sup>86</sup> Brigham's language echoed the *Notes on Hours of Labor* prepared by Major Jones.

If the Labor Department, NDAC, and

<sup>82</sup> (1) Memo, Birdseye for Bennett, 9 Oct 40. OCE LRBr Files, Constr Div. (2) Ltr, Hartman to CQM's, 30 Nov 40. 600.1 (Radford OW) (Labor). (3) Statistics prepared by Labor Rel Sec Constr Div OQMG (n.d.), sub: Increases in Hourly Rates Approved for CPFF Projects, 1 Jul 40 to 31 Dec 41. OCE LRBr Files.

<sup>83</sup> See p. 161, above.

<sup>84</sup> Memo, prepared by Jones, 12 Sep 40, sub: *Notes on Hours of Labor*. OCE Legal Div Files, Labor—Gen.

<sup>85</sup> Memo, Huntington Thom, OASW, for Patterson (n.d.), sub: Status of Labor Policy. Madigan Files, 102 Labor.

<sup>86</sup> Memo, Brigham for Bennett, 7 Oct 40. OCE LRBr Files, Cp Edwards, Gen.

AFL were prepared to accept such conditions, they gave no sign of it, for they denounced unequivocally Major Jones' Notes. On 15 October Coyne, Maxwell Brandwen of Hillman's office, and Daniel W. Tracy, former head of the electrical workers union and now Assistant Secretary of Labor, discussed the matter with Maj. Sidney P. Simpson, Patterson's special assistant for personnel. Brandwen began somewhat heatedly, "We want to find out ways and means so that what the Assistant Secretary of War says will be done and not be circumvented by lawyers." Coyne and Tracy cited instances of contractors working their employees fifty-six hours a week at straight time and said this had to stop. Major Simpson went along with the others, suggesting, "Chop off a few heads, that's what I say."<sup>87</sup> At Simpson's urging, Judge Patterson on 19 October directed General Gregory to comply strictly with NDAC policy. Three days later Patterson rewrote Jones' Notes and told Gregory to send the revised version to the field. Under the new instructions, workers would be compensated in accordance with "local recognized practice" if they worked more than forty hours a week or on weekends and holidays.<sup>88</sup>

Just before Patterson restated his position, 200 carpenters at Camp Meade struck for time and a half on Saturdays and double time on Sundays. On Thursday morning, 17 October, Maj. James A.

Noxon, the CQM, had telephoned to report the union's demands. His SCQM said there was no authority for paying premium rates and advised him to write to Brigham. That afternoon Noxon phoned again to say that the union had called a strike for the following day. This time he got orders "to make sure that the labor representatives fully understand that such action would place full responsibility for delaying work upon them."<sup>89</sup> On Friday the carpenters walked out. It was the first strike of any size in the military construction program. By this time Brigham knew what was going on and telephoned H. W. Blumenberg, general representative of the Carpenters Brotherhood: "Tell those boys to get back to work and we will look into it . . . ." Blumenberg put him off with a promise to visit the site that afternoon.<sup>90</sup> The strike continued until Monday, the 21st, when Coyne intervened to send the men back to work. On the 23d Blumenberg went to Brigham's office to try to reach a settlement. While the two men were talking, word came to Brigham that Hillman's office had just notified the press that the union's demands would be met. The strike had been settled, not by the Construction Division, but by the NDAC.<sup>91</sup>

Deploring the "surrender" to the unions, the *Army-Navy Journal* predicted strikes at jobs throughout the country.

<sup>87</sup> Notes of Conf, Coyne, Brandwen, *et al.*, 15 Oct 40. Ohly Files, Labor-Constr—"Notes on Hours of Labor" or "The QM Crisis."

<sup>88</sup> (1) Memo, Simpson for Patterson, 16 Oct 40. Madigan Files, 102 Labor. (2) Memos, Patterson for Gregory, 19, 22 Oct 40. OCE LRBr Files, ASW. (3) Ltr, Hartman to CQM's, 24 Oct 40. 600.1 (Labor) (Eight-Hour Law) 1940.

<sup>89</sup> Résumé of Tel Convs, Noxon and H. G. Wray and Hadden, 17 Oct 40. OCE LRBr Files, Ft Meade, Gen.

<sup>90</sup> Tel Conv, Brigham and Blumenberg, 18 Oct 40. OCE LRBr Files, Ft Meade, Gen.

<sup>91</sup> (1) Tel Conv, Brigham and Coyne, 21 Oct 40. (2) Notes of Conf, Brigham and Blumenberg, 23 Oct 40. Both in OCE LRBr Files, Ft Meade, Gen.

On 26 October the *Journal* told its readers:

It is apprehended that the cantonments will not be completed on schedule, in spite of the urgency with which the constructing Quartermasters have been pressing the work. If this be so, the fathers and mothers of the young men not provided with proper housing should place the blame where it belongs, upon the Labor Unions, which put extra compensation above responsibility to the lads called to protect them and their country.<sup>92</sup>

The article's emotionalism and antilabor tone alarmed Judge Patterson.<sup>93</sup> On 9 November, after rejecting the idea of a letter to the *Journal*, he released to the newspapers a statement of the War Department's labor policy, the same policy handed down by NDAC. Praising American workers for their patriotism and co-operation, he assured them that existing "standards as to wages, hours of work and overtime . . . must be maintained if the defense program is to go effectively forward." He dismissed the strike at Meade as unimportant, ascribing it to "a temporary misunderstanding of the policy of the War Department as to overtime pay" and asserting that it had not affected the camp's completion schedule.<sup>94</sup>

Convinced that the local practices formula was no longer open to question, Brigham did what he could to limit overtime. Twice during November, on the 4th and on the 30th, he warned CQM's that only one overtime payment would be automatic—time and a half for over

eight hours a day, as required by law. Strict regulations governed Saturday, Sunday, and holiday premiums. Although Constructing Quartermasters could authorize up to time and a half on weekends and holidays if the situation was urgent and the rate was "established local custom," final approval of all such premiums rested upon a contract change order rather than upon a simple authorization. All double time had to have Hartman's sanction.<sup>95</sup> But even under these rules, the bill for overtime would be huge.

Construction officers faced a dilemma. To work weekends at premium rates would mean deficit spending. To suspend work on Saturdays and Sundays would delay mobilization. On 23 October Hartman had made his position clear: for each weekend worked, premiums would total about \$100,000 at Meade and \$200,000 at Edwards; the expense would be heavy at nearly every project. Meeting deadlines would mean spending money.<sup>96</sup> Constructing Quartermasters were, on the whole, more cautious than their chief. Many of them hesitated to authorize premium work. The CQM at Forrest closed down his project over the long Armistice Day weekend rather than pay \$114,000 in premiums. He thus lost three days of good construction weather which he could not redeem at any price. Such shutdowns were fairly common.<sup>97</sup> Not

<sup>92</sup> *Army-Navy Journal*, LXXVII, No. 8 (October 26, 1940), p. 213.

<sup>93</sup> Memo, Simpson for Patterson, 4 Nov 40. Ohly Files, Labor-Constr—Policies & Problems 1.

<sup>94</sup> WD Press Release, 9 Nov 40, sub: WD Labor Policy on Cantonment Constr. Ohly Files, Labor-Constr—Policies & Problems 1.

<sup>95</sup> (1) Ltrs, Hartman to CQM's, 4, 30 Nov 40. OCE Legal Div Lib, FF Ltrs. (2) Note, Brigham to EHD, Jul 49.

<sup>96</sup> Ltr, Hartman to TAG, 23 Oct 40. G-4/32220.

<sup>97</sup> (1) Memo, Huntington Thom, OASW, for Patterson (Nov 40). OCE Legal Div Files, USW. (2) Ltr, CQM Cp Forrest to TQMG, 11 Nov 40. 600.1 (Cp Forrest) (Labor) 1.

until late November, when CQM's received new instructions—"work overtime whenever it becomes necessary to complete your project on time"—was a 7-day week the norm.<sup>98</sup>

As labor costs soared higher, the thinking in Patterson's office changed. First John H. Ohly, one of Simpson's assistants, and then Simpson himself swung around toward the Quartermaster view.<sup>99</sup> "There is no place for penalty provisions in defense contracts," Simpson wrote to Coyne on 11 November.<sup>100</sup> At the Building Trades Convention at New Orleans three days later, Simpson tried to talk union leaders into giving up peacetime privileges. He returned from the meeting convinced that "no immediate agreement" was possible.<sup>101</sup> When talks resumed in Washington a short time later, spokesmen for the unions said they would accept a universal time and a half rate for over forty hours a week—an arrangement under which labor would have sacrificed little if anything; but they refused even to consider surrendering premiums, whether time and a half or double time, for Saturday, Sunday, and holiday work. Taking the unions' side, Hillman argued that labor had a right to "such excess gravy" because the jobs were temporary and away from home.<sup>102</sup> Summing up the situation, C. Huntington Thom of

Patterson's staff presented a gloomy picture:

At present the government is being asked to make all the concessions and there is much less reason for us to do this in the case of the Building Trades than in many other industries where wage scales for laborers and mechanics are appreciably lower. All of the people in the War Department with whom I have discussed matters have demonstrated their desire and efforts to be just and equitable in treating labor problems on construction work. At the same time there is unanimity of feeling that at present the government has hold of the smaller end of the stick.<sup>103</sup>

While many of the labor troubles that beset camp construction were inherent in the program's size and speed, some might have been averted had the Army and the unions been able to agree. But the Roosevelt administration's attitude doomed efforts to arrange a fair settlement. Addressing the Building Trades Convention, Coyne said of the NDAC:

The work of this Commission and its accomplishments are exemplified by the conditions which apply on national defense projects and the recognition given to the building and construction trades organizations on the many defense projects now under construction in different sections of the Country. Also the recognition by the Government of the 40-hour work week and the payment of overtime rates for work performed on Saturday, Sundays, and holidays is in itself an accomplishment that cannot be minimized. This is the first time that the Government, under similar circumstances, has ever accorded such recognition to the building and construction trades unions.<sup>104</sup>

Asking the unions to give up any of the

<sup>98</sup> Ltr, FF Br to CQM Cp Forrest, 23 Nov 40. 600.1 (Cp Forrest) (Labor) I.

<sup>99</sup> (1) Memo, Ohly for Simpson, 23 Oct 40. (2) Memo, Simpson for Hillman, 12 Nov 40. Both in Ohly Files, Labor-Constr—Policies & Problems 2.

<sup>100</sup> Memo, Simpson for Coyne, 11 Nov 40. Ohly Files, Labor-Constr—Policies & Problems 2.

<sup>101</sup> Memo, Simpson for Coyne, 16 Nov 40. Ohly Files, Labor-Constr—Policies & Problems 2.

<sup>102</sup> Draft Memo, Thom for Patterson (n.d.), sub: Work in Excess of 40 Hours a Week or on Saturdays, Sundays or Holidays. OCE LRBr Files, USW.

<sup>103</sup> Draft Memo, Thom for Patterson (n.d.), sub: Status of NDAC Labor Policy. OCE LRBr Files, USW.

<sup>104</sup> Bldg Trades Dept, *Proceedings*, November 1940, p. 223.

ground they had gained was asking a great deal. Reaching an agreement with them would take time and patient bargaining.

### *Management and Supervision*

To complete the camps on schedule with the labor, equipment, and materials available, contractors needed not only experience but adaptability as well. Ordinarily money, not time, mattered most in construction. Jobs were planned in minute detail and carried out in a way calculated to hold down cost and promote profits. Contractors assumed full control of their projects and conducted operations as they thought best. With the emergency, the Army made exceptional demands upon its contractors—exceptional in that it asked them to produce at several times their normal rate, without the usual well-laid plans, and, to some extent, without their usual independence. Few camp contractors had faced such a challenge before.

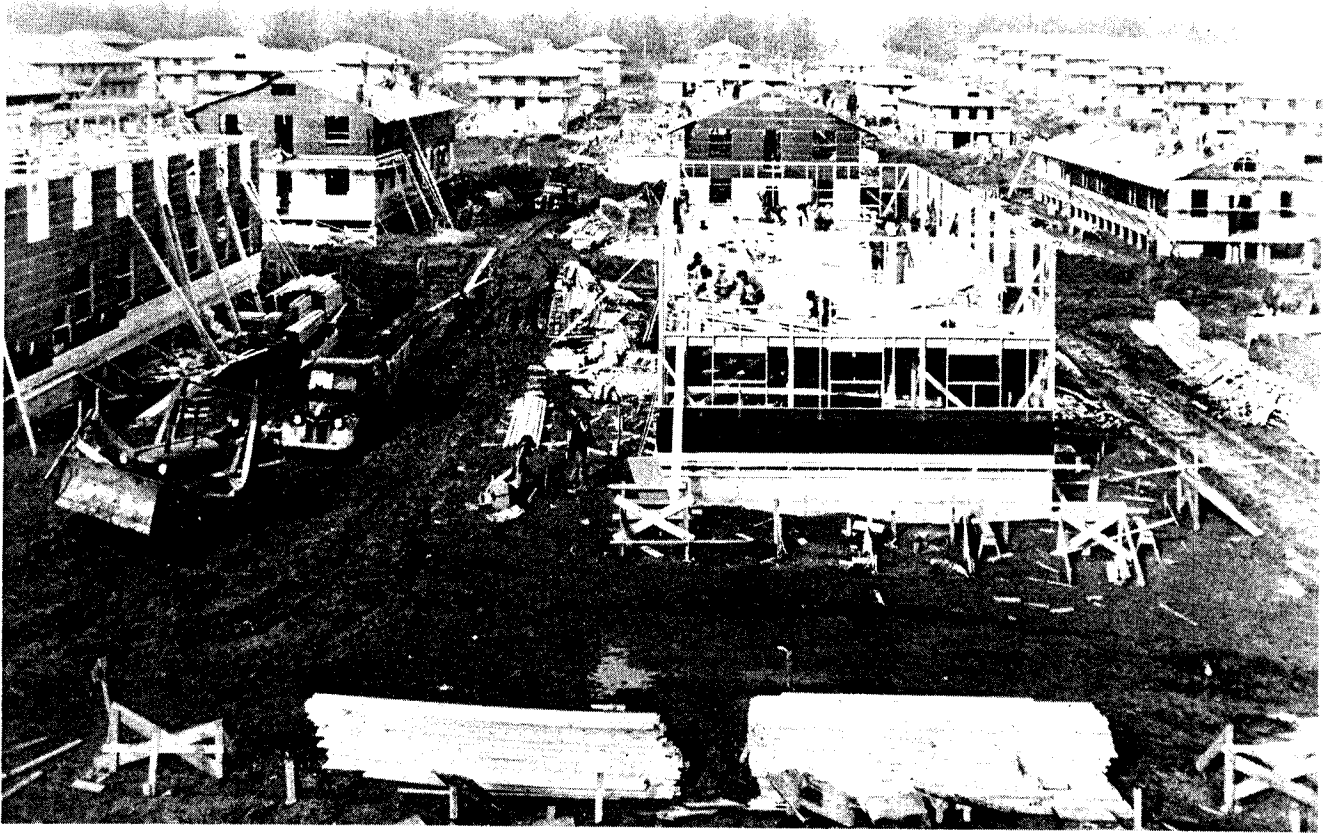
Chosen primarily for their managerial strength, fixed-fee contractors felt obliged to staff their projects well. At virtually every job, firm members or other top executives assumed direction of the work. These men, unlike their subordinates, whose salaries the government agreed to pay, took their earnings out of profits. How many such men participated and how much time they spent at the site varied from job to job. Thirteen executives of the Consolidated Engineering Company helped direct the Camp Meade project, eight of them devoting between 50 and 90 percent of their time to the work. Although Meade had the heaviest concentration of executive talent, Wolters, Knox, Riley, Eustis, McClellan,

and Bowie were not far behind. A study of thirty-two representative projects revealed an average of four men on non-reimbursable salaries, the equivalent of two full-time executives, per project.<sup>105</sup> Along with company officials and top managerial personnel went groups of trusted employees who formed the backbone of project organizations. Nonetheless, few firms, if any, regularly employed enough key men for jobs as large and difficult as the camps and cantonments.

General Hartman put but two restrictions on hiring key personnel. First, he placed a ceiling of \$9,000 per year on reimbursable salaries. Second, he insisted that appointments be subject to CQM approval. He was interested in making sure that projects were well staffed rather than in controlling salaries. Kirkpatrick told CQM's to bear "in mind that to complete these projects in the time required, a high calibre type of personnel must be employed by the contractor and, in order to secure that type of personnel, the contractor must of necessity pay a substantial salary." He justified salaries in excess of previous earnings by pointing to the long hours required, and the short duration of the jobs. He emphasized that many of the men would have to maintain two residences.<sup>106</sup> CQM approval became more or less routine; contractors generally set salaries and filled posts without interference. Salaries averaged approximately 20 percent above the employees' previous

<sup>105</sup> Data prepared by Constr Div OQMG (Apr 41), sub: List of Resident Officers of A-Es and Contractors Showing percentage of Time Spent on Project on Nonreimbursable Basis. Opns Br Files, Gen Addl Data.

<sup>106</sup> OQMG Constr Div, FF Ltr 5, 7 Oct 40. EHD Files.



BUILDING BARRACKS, CAMP LEONARD WOOD, MISSOURI

earnings, an increase the Army considered "equitable, if not insufficient."<sup>107</sup>

In the race to complete the camps by Christmas, contractors faced a severe test. Speed called for radical departures from custom. Ordinarily construction was scheduled in logical sequence. First, land was cleared, drained, and graded. Next, roads and utilities were put in. Only when easy access to building sites had been provided did structural work begin. Contractors usually divided large housing projects into areas. Excavating crews dug foundations in one area and then moved on to another. They were

followed at each area, in turn, first by masons and carpenters and then by electricians, plumbers, and painters. Estimates put the time required to build a division camp by this method at one year. Clearly, faster methods had to be devised. Major Larson endorsed a popular solution to the problem when he wrote, "On a ninety-day program, all phases of construction must be carried on simultaneously."<sup>108</sup>

Contractors wasted little time on preliminaries. Most abandoned their customary procedure and began everything at once. Carpenters, usually among the

<sup>107</sup> Testimony of Maj Garrison H. Davidson, 20 May 41. In Truman Comm *Hearings*, Part 4, p. 1014.

<sup>108</sup> Ltr, Larson to Gregory, 21 Dec 40. 600.94 (Cp Blanding).

last to begin, started work almost immediately. Whatever else might remain undone, contractors intended to have housing completed when troops arrived. Dunn and Hodgson, given thirty-four days to prepare a division tent camp at McClellan, found it "necessary to waive and disregard a normal plan of good construction scheduling."<sup>109</sup> Starrett Brothers and Eken, acting on advice from Major Larson, gave structures priority over grading and drainage at Blanding. At Riley, Long-Manhattan-Watson began barracks and roads at the same time. Many contractors started building operations throughout an entire project instead of in a single area. At several job sites conditions precluded an immediate start on barracks, hospitals, and other buildings, but nowhere was structural work long deferred.<sup>110</sup>

Knowing work would be slow until roads were in, contractors pushed grading and surfacing work, but unfavorable weather conditions hampered their efforts. Unusually heavy rains transformed unfinished roads into seas of fluid muck. The situation was particularly bad at sites with poor natural drainage, such as Blanding and Forrest, and at those with viscous clay soil, such as Meade. As trucks, graders, and bulldozers sank into the ooze, contractors brought in draglines. They spread thousands of tons of gravel, crushed stone, slag, and tailings in attempts to provide

reasonably stable surfaces. The work progressed slowly. Without roads, contractors devised novel methods of delivering materials to building sites. Some used tractors to drag supply-laden sleds through the mud. Some rigged skips of buckets or baskets on aerial ropeways. Some laid corduroy roads. Costly and inefficient though these expedients were, contractors had no choice but to try them.

Most contractors attempted to hasten construction through liberal use of manpower. At eleven camps and cantonments, average peak employment during the last three months of 1940 was 11,212.<sup>111</sup> A study begun in December 1940 revealed overtime operations at all and extra shifts "at a considerable number" of 50 fixed-fee and 136 lump sum projects. These practices were costly—at times inordinately so. In hiring masses of men, contractors took a large percentage of incompetents and thus paved the way for high turnover and low production rates. Overtime meant premium wages; extra shifts, low efficiency. Moreover, a shortage of experienced foremen made it hard to get an honest day's work from labor. Although large numbers of men working long hours undoubtedly helped speed construction, output per man per hour was far below usual peacetime standards.<sup>112</sup>

Leading contractors tried still other ways of saving time. The Walsh Construction Company, unable to recruit enough skilled labor, sped carpentry work at Edwards by a mass-production

---

<sup>109</sup> Ltr, CQM Cp McClellan to TQMG, 2 Feb 41. 652 (Ft McClellan) II.

<sup>110</sup> (1) Opns Br Files, QM-CO, Cp Blanding. (2) Ltr, Long-Manhattan-Watson to H Comm on Mil Affs, 31 May 41. Opns Br Files. (3) Memo, TIG for CofS, 5 Dec 40. Opns Br Files, IG Rpts. (4) Ltr, Constr Div OQMG to G-4, 6 Jun 41. QM 600.1 (Defects).

---

<sup>111</sup> Table, prepared by Bureau of Labor Statistics, Dept of Labor, Average Employment on Selected Mil Constr Projs, Monthly, By Geographical Area. EHD Files.

<sup>112</sup> Slaughter, Saville & Blackburn Rpt, pp. 10-13.



PREFABRICATING YARD AND SAWMILL, CAMP BLANDING, FLORIDA

system of job breakdown and specialization. Each workman learned a simple task which he repeated from building to building. The method was fast and not unduly expensive. Attacking the same problem in a somewhat different fashion, Starrett Brothers and Eken stationed experienced carpenters next to inexperienced ones to show them what to do.<sup>113</sup> The contractors at Blanding were also among the first to test another practical timesaver, prefabrication. Erecting a sawmill at their lumber yard, they manufactured buildings in sections. "The

operations were so well developed at the mill," said Major Larson, "that a standard size messhall was manufactured in ten minutes, and a time test of the erection of the building was accomplished in the field on the foundation in twenty-five minutes."<sup>114</sup> At least five other contractors also set up mills. One of these firms, the W. E. Kier Construction Company, earned high praise for its methods. At Camp Callan, Kier not only established an efficient prefabricating system but, to a large extent, mechanized his organization. He set up his own central concrete plant and delivered mix to various parts of the project by truck,

<sup>113</sup> (1) Memo, FF Br Sec D for Loving, 6 Nov 40. QM 333.1 (Cp Edwards) 1940. (2) Interv with Ernest J. Semmig, Vice Pres, Starrett Bros and Eken, 26 Oct 56.

<sup>114</sup> Incl with Ltr, Larson to Gregory, 4 Jan 41. QM 652 (Cp Blanding) 1941.

hired quantities of trenching and other modern equipment, and even succeeded in persuading the unions to permit spray painting. Delighted with the results obtained by these and other progressive concerns, Hartman encouraged rank-and-file contractors to do likewise.<sup>115</sup>

The limit to which a contractor could go in "trading dollars for days" was set by the Constructing Quartermaster. Charged on the one hand with expediting completion, and on the other with safeguarding public funds, CQM's found themselves in a tight spot. Because they passed on every dollar spent by fixed-fee contractors, they influenced both the rate of construction and its cost. The power conferred on the CQM's was, in Madigan's opinion, a major defect of the fixed-fee method. Soon after coming to the War Department, he cautioned General Gregory: "The Army is going to have a great time protecting itself where a contractor is hired for his knowledge and experience to keep him from catering to all the decisions of the Quartermaster's representative, regardless of their merit, on the grounds that he is paying the bill." He added, with pointed irony, that he had no objection to letting the CQM direct construction provided he was "equal in experience and mentality to the heads of the contracting

firm."<sup>116</sup> These observations prompted Colonel Thomas to remark that he doubted if Madigan knew there was a Comptroller General. Viewing the problem from the standpoint of the Quartermaster field, Thomas commented:

One can imagine the situation of a Constructing Quartermaster called in from civil life, where he was rated as a first class engineer and one who had had considerable responsibility, and placed in charge of one of these large camps for housing up to 40,000 men, knowing nothing of military customs of the service, but he had heard in a vague way that the Comptroller of the Treasury was watching all expenditures and if he was not careful with Uncle Sam's money he might have to pay for things, not properly authorized, out of his own pocket.<sup>117</sup>

Seen from any angle, it was a fine line the CQM's had to tread.

With millions upon millions going into fixed-fee projects, Hartman took precautions against irregularities and mistakes. The auditing system he adopted erected positive safeguards against dishonesty and waste. Designed by Lincoln G. Kelly, vice president of the American Institute of Accountants, and Oscar I. Koke of the Accounting and Auditing Branch, the system provided for a current, detailed, and independent audit of contractors' accounts. At each fixed-fee project, a field auditor, selected by Koke, saw to it that the contractor recorded costs accurately and received reimbursement only for authorized expenditures. Knowing that contractors needed money to keep going, Kelly and Koke prescribed a continuous, "minute to minute" preaudit. Members of the auditor's

<sup>115</sup> (1) Ltr, Long-Manhattan-Watson, Ft Riley, Kan., to H Comm on Mil Affs, 31 May 41. Opns Br Files, Loose Papers. (2) Memo, A. J. Hammond, Consulting Engr, for Chief Constr Div, 23 Jan 41. QM 333.1 (Cp Forrest) Jul-Aug 41. (3) Ltr, Sound Constr and Engrg Co. and Peter Kiewit Sons' Co. to CQM Ft Lewis, 7 Nov 40. 652 (Ft Lewis) II. (4) Ltr, IGD to TIG, 9 Sep 40. Opns Br Files, IG Rpts. (5) Compl Rpt, Camp Callan, pp. 3-6. (6) OQMG Constr Div, FF Ltrs 2 (n.d.), and 9, 15 Oct 40. EHD Files.

<sup>116</sup> Memo, Madigan for Gregory, 30 Sep 40. Madigan Files, Cp Edwards.

<sup>117</sup> Replies to Questionnaire, Thomas to EHD, 31 May 56.

staff examined all shipments of materials and checked them against invoices, kept the time worked by each employee and checked it against the contractor's payroll, and investigated each claim against the contractor before he made payment. Hence, when he presented his vouchers for reimbursement, the auditor could quickly verify them and submit them for approval by the CQM, who would, in turn, send them on to the nearest Army finance office for payment. In their administration of this audit-reimbursement machinery, CQM's tried both to curb expenditures and avoid delays—a two-fold objective not easily attained.<sup>118</sup>

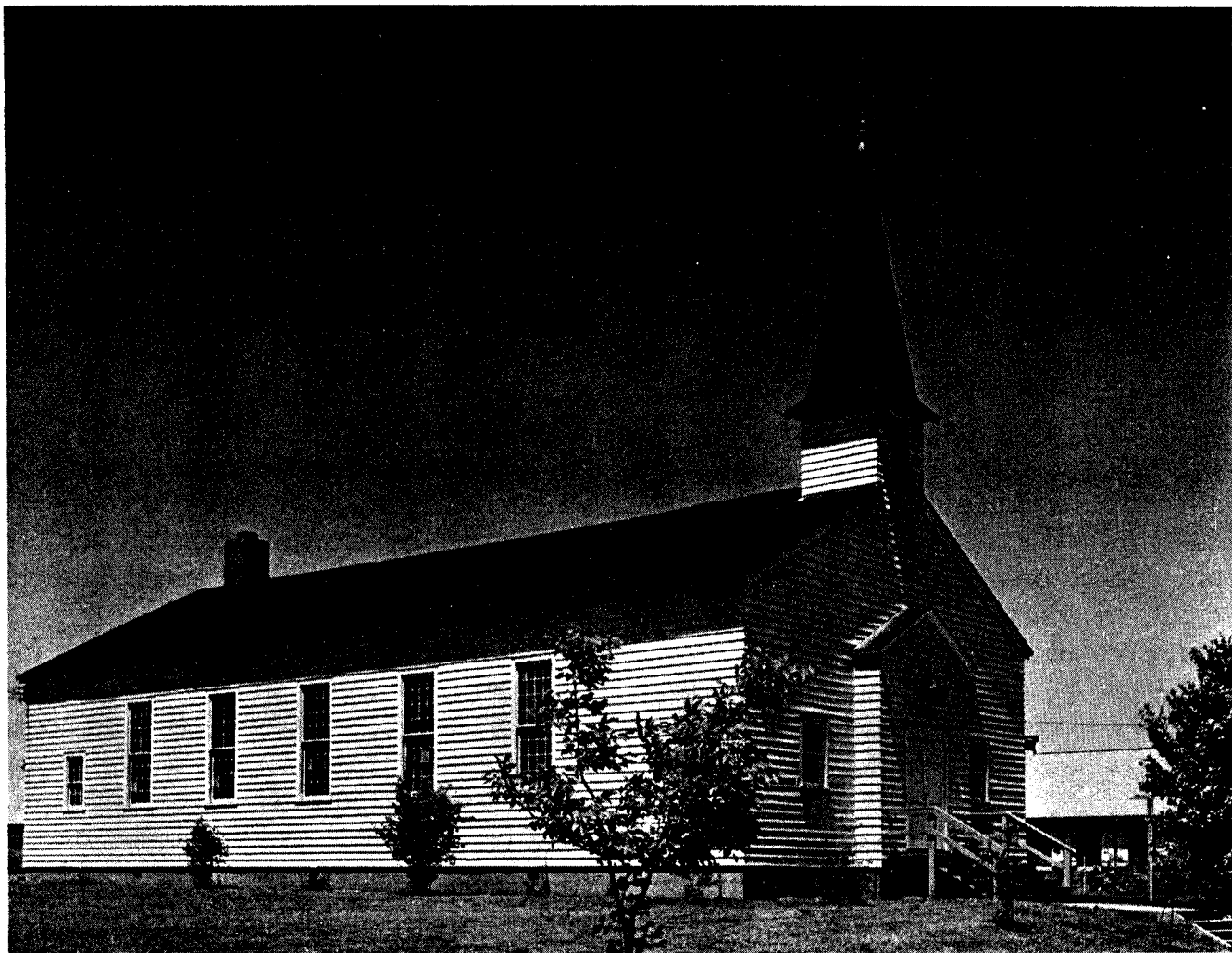
To set up the audit machinery and get it to running smoothly was in itself a big undertaking. Nowhere was the shortage of trained men more acute than in accounting. Koke, wishing to appoint top professionals to field auditor's posts, discovered that such men were hard to recruit. At many projects, construction was well under way before auditors turned up. Meanwhile, unpaid bills accumulated. When auditors finally arrived, they faced a backlog of old work and a steadily increasing volume of new. Shortages of timekeepers, bookkeepers, shipping clerks, and materials checkers further complicated the auditing task. Contractors, similarly handicapped by personnel shortages, were sometimes slow in submitting vouchers for reimbursement and frequently neglected to furnish sufficient evidence to support their claims. To make matters worse, projects were often hundreds of miles from the nearest

regional finance office. Because the Chief of Finance made his officers audit all vouchers themselves, Constructing Quartermasters had to send supporting papers along with requests for payment. There were delays and more delays, as bottlenecks developed in field auditors' departments, tons of paper moved from the projects to the finance offices, and a second, seemingly superfluous, audit was performed.<sup>119</sup>

How to streamline the audit and still maintain adequate safeguards was a controversial question. The procedure recommended by Kelly and Koke and approved by the Comptroller General involved meticulous checks and double checks. Every timekeeper or materials checker employed by the contractors had a counterpart on the field auditors' staffs. This system, however sound in theory, proved impractical under emergency conditions. Duplication had to be curtailed. There were two ways to do it. First, the government could reduce the auditing detail, using spot checks instead of preauditing every transaction; or, second, it could persist in making a complete check but ask contractors to discontinue their timekeeping and inspections and accept field auditors' records. Used successfully in World War I, the second method had many staunch advocates. Koke nevertheless insisted the first method was the only acceptable one. He felt the purpose of the audit would be lost if the government helped keep contractors' records. By early October he had instituted spot checks at

<sup>118</sup> (1) Constr Div OQMG, Manual for Field Auditors on CPFF Contracts, 6 Sep 40. EHD Files. (2) Ltr, Kelly to authors, 1 May 59. (3) Replies to Questionnaire, Koke to EHD, 25 May 59.

<sup>119</sup> (1) Memo, Constr Div OQMG for Rcd (Apr 41), sub: Delays in Payments and Reimbursements. Opns Br Files, Delays. (2) Opns Br Files, IG Rpts. (3) Memo, Lt Col B. B. Somervell for Gregory, 9 Dec 40. EHD Files.



STANDARD CHAPEL (700 SERIES), EXTERIOR VIEW

several projects, among them Blanding and Edwards. Maj. John A. Hunt of The Inspector General's Department, after a visit to Blanding on the 11th, pronounced the experiment a success. So enthusiastic was his report that Reybold instructed Gregory to study the Blanding system with a view to adopting it at all projects.<sup>120</sup> Meantime, however, Major Groves had gone to Edwards and found

the audit there "decidedly inadequate."<sup>121</sup> In response to Groves' criticism, and without informing Koke, Loving on 16 October ordered CQM's to use the second method. Because the projects were slow to comply, he repeated this order on 28 November.<sup>122</sup>

Whatever the method, auditing was an uphill job. Rarely could a Constructing Quartermaster keep reimbursements

<sup>120</sup> (1) Memo, Koke for F. L. Yates, Office of the Comptroller Gen, 27 Jul 40. EHD Files. (2) Thomas Interv, 27 Dec 55. (3) Rpt, Hunt to TIG, 18 Oct 40. Opns Br Files, IG Rpts. (4) WD Ltr AG 600.12 (10-18-40) M-D to TQMG, 30 Oct 40. QM 333.1 (Cp Blanding) 1940.

<sup>121</sup> Memo, Groves for Gregory, 11 Oct 40. Opns Br Files, Rpts of Insp.

<sup>122</sup> (1) Memo, Kirkpatrick for SCQM's, 16 Oct 40. (2) Memo, Hartman for Gregory, 23 Oct 40. Both in Opns Br Files, Rpts of Insp. (3) Ltr, FF Br Constr Div to CQM's, 28 Nov 40. 600.1 (Elwood OW) (Labor) I.

current. Project after project reported serious delays. Large unpaid balances developed, some totaling in the millions. Few construction firms had cash reserves big enough to cover such contingencies. Contractors had to borrow, some to the limits of their credit. Many failed to pay their bills when due and thus lost discounts for prompt payment; worse, they lost the confidence of suppliers. In attempts to speed collections, creditors wrote dunning letters, threatened to withhold further shipments, and even appealed to Congress—all to little avail. Nor did efforts to streamline auditing procedures produce a marked improvement in the rate of reimbursement. However it was handled, the auditing on fixed-fee projects—the innumerable checks and verifications, the great amount of paper work, the tedious detail—took time.<sup>123</sup>

Complicating relationships between contractors and CQM's was the shortage of appropriated funds. That the estimates General Moore had imposed on Hartman were far too low was increasingly apparent. On a visit to Camp Edwards in late September, Madigan learned that Walsh had already spent more money than the Army had allotted for the entire job. Soon other projects were calling for additional funds. Small at first, the sums requested rapidly grew larger, jumping from five to six figures and then from six to seven. Early in November Hartman asked for revised estimates from all camp and cantonment projects. Replies indicated that costs

would far exceed appropriations. In addition to funds originally allotted, Forrest would need nearly \$6 million; Blanding, some \$7.5 million; Edwards, about \$13 million. And so the answers went. By the first week in December the known deficit had climbed to \$140 million. Many projects had yet to be heard from. Moreover, the new estimates did not cover recently authorized extras, such as chapels, field houses, and psychiatric wards.<sup>124</sup> For the CQM's, as for Hartman, the situation posed a serious dilemma, whether to cut expenditures by slowing construction or to push the work at top speed and go deeper and deeper into the red.

Without sufficient funds, many inexperienced CQM's hesitated to sanction expensive, high-speed methods. Hartman's instructions to field officers put increasing emphasis on speed. But, legally, he could not authorize deficit spending; only the President could do that. On a tour of southern camps during October, General Reybold found CQM's "in doubt as to their authority and hesitant to proceed." Diagnosing the trouble, he suggested to Gregory, "This may have been caused by meager information furnished to them by your office, together with only a partial allotment of funds. Constructing Quartermasters apparently are uncertain that they could go ahead with the entire project in the absence of full amount of funds re-

<sup>123</sup> (1) Opns Br Files, IG Rpts. (2) Memo, TIG for CofS (Dec 40). QM 333.1 (Cp Claiborne) 1940. (3) Rpt, IGD to TIG, 18 Dec 40. QM 333.1 (Cp Blanding) 1940.

<sup>124</sup> (1) Madigan Interv, 18 Jun 56. (2) 652 files, various projects. (3) Ltr, Birdseye to CQM's (n.d.), sub: Status of Funds Rpt. QM 600.1 (Rpts) 1941. (4) Memo, TIG for CofS, 10 Dec 40. Opns Br Files, IG Rpts. (5) Ltr, Solomon & Keis to Maj Larson, 4 Nov 40. 600.94 (Cp Blanding). (6) Memo, Hartman for Patterson, 7 Dec 40. 652 (Cp Edwards) I. (7) Ltr, Hartman to TAG, 7 Dec 40. QM 600.1 (Funds) IX. (8) Memo, G-4 for Files, 4 Dec 40. G-4/32243.



STANDARD CHAPEL (700 SERIES), INTERIOR VIEW

quired.”<sup>125</sup> CQM’s were indeed uncertain. Their orders, like Hartman’s, were to meet all deadlines and stay within allotted funds. Attempts to carry out these conflicting instructions frequently took the form of alternating pressures and restrictions on contractors.

That delays developed and mistakes occurred was understandable. Haste, inexperience, and inadequate funds were explanation enough. It was up to the Washington office to remove obstacles

and to supply the extra push needed to reach construction goals.

### *Nearing the Goal*

By November 1940 the program had reached its critical stage. Winter was closing in; time was running out; and pressure was increasing with each passing day. Military leaders were more and more uneasy about progress at the camp sites. The Quartermaster organization, hastily put together and woefully undermanned, was under an almost intolerable strain. Climaxing twenty years of un-

<sup>125</sup> Memo, Reybold for Gregory, 21 Oct 40. QM 600.1 (Misc.) 1940.

realistic mobilization planning and of compromise on the fundamental question of where construction properly belonged, the situation produced grave concern within the War Department.

Early reports from the field had been encouraging. On their first rounds of the camps, inspectors found no cause for alarm. In fact, their accounts of progress were almost uniformly optimistic. Words like satisfactory, excellent, and splendid peppered their reports.<sup>126</sup> As if to confirm the inspectors' judgment, the first-priority Guard divisions, four in all, moved on schedule, late in September, into tent camps at Dix, Jackson, Sill, and Lewis. On 7 October William F. Carey of Harrison's staff told his chief, "On the whole, I was quite favorably impressed with the organization and general progress of these cantonments."<sup>127</sup> A short time later Harrison himself gave the program a clean bill of health. "Members of our staff are currently visiting the larger projects," he informed Patterson on 16 October. "From their visits it is clear good progress is being made."<sup>128</sup>

During October trouble spots began to appear. Around the first of the month, Carey noted potential delays at two southern camps, McClellan and Blanding. During the next fortnight, project after project was reported behind. Contrary to predictions, three of the second-priority Guard camps—McClellan, Livingston, and Shelby—were ready to accommodate divisions

on schedule. But the three remaining ones—Blanding, Robinson, and Bowie—were unable to meet October deadlines. Claiborne, Forrest, Meade, San Luis Obispo, Indiantown Gap—one by one the camps slated for occupancy in November and December moved into the doubtful column. Some observers questioned whether the units living in tents at Dix, Lewis, and Sill would be in winter quarters when cold weather set in.<sup>129</sup> On 29 October Loving informed Hartman that, while building construction was generally "up to or ahead of schedule," progress on utilities was "not so promising." Problems with water systems, heating, sewers, and roads would upset timetables for bringing troops into camp.<sup>130</sup>

By this time, an effort was under way to set new target dates, more realistic than the old. That existing schedules for housing the Army were impossible to meet was now beyond question. General Marshall's assumption that camps at new locations could be built in ninety days was manifestly false. Hartman's minimum of four months appeared to be more like it. Still the original deadlines held. Probing into the situation, Madigan found the demand for such great speed not only unreasonable but unnecessary. Shrewd politician that he was, he scoffed at plans for calling up National Guard units on the eve of the Christmas holiday. He considered it "ridiculous" and told Patterson and Stimson so.<sup>131</sup> On 17

<sup>126</sup> (1) Opns Br Files, IG Rpts and Rpts of Insp. (2) QM 600.914 various projects.

<sup>127</sup> Memo, Carey for Harrison, 7 Oct 40. Madigan Files, Cantons—Tp Housing—Current Projects.

<sup>128</sup> Memo, Harrison for Patterson, 16 Oct 40. Madigan Files, 101.1 Canton Design and Constr.

<sup>129</sup> (1) Memo, Carey for Harrison, 7 Oct 40. (2) Opns Br Files, IG Rpts. (3) D/S, Reybold to Gregory, 21 Oct 40. G-4/31735-1. (4) OCS, Notes of Confs, 26 Sep 40—.

<sup>130</sup> Memo, Loving for Hartman, 29 Oct 40. QM 600.914 1931—.

<sup>131</sup> Madigan Interv, 18 Jun 56.

October Patterson asked Reybold to "check on the relationship between the present designated completion dates and the time of expected arrival of troops in order to ascertain whether . . . we are demanding completion at more than a reasonable length of time ahead of the arrival of the various increments of troops."<sup>132</sup> The answer was yes. The Guard was pressing for postponements and was likely to get them. Shortages of uniforms and equipment would slow the intake of draftees considerably. Because Guardsmen were to help train selectees and both were being called for one year's service, the rate of Guard inductions would also have to be reduced. More time was needed not only for construction but for orderly expansion of the Army as well. By early November the General Staff had revised the mobilization schedule. Of the eleven Guard divisions still awaiting induction, three would come in about 1 December, the rest in January and February. Only token calls of draftees would be made in 1940. The Army's change in plans became public late in November.<sup>133</sup>

Meanwhile, salvos of criticism assailed the Construction Division. Delays, high costs, poor living conditions at the camps, production bottlenecks, equipment shortages, spiraling wages, and muddy sites—all these were laid to the Quartermaster Corps. Numerous complaints appeared in newspapers. Po-

litical interest in construction sharpened. The Army had to defend itself against imputations of incompetence, ineptitude, and stupidity. As public confidence declined, official dissatisfaction deepened. More and more inspectors roved the field, and their reports were increasingly unfavorable. Much of the criticism was misdirected. And much was picayune. Nevertheless, scrutiny did reveal flaws in the construction setup. One was the practice of scheduling individual projects for completion all at once rather than piecemeal. Another was the absence of a modern cost accounting system. A third, vitally important, was in the Fixed Fee Branch. Responsible at the same time for negotiating contracts and supervising construction, Loving was finding it humanly impossible to do everything demanded of him.<sup>134</sup>

After Armistice Day, Gregory and Hartman acted to strengthen the Fixed Fee Branch. On 12 November they informed Major Groves that, as soon as an order promoting him to colonel went through, he would replace Loving as branch chief. Groves' assignment to the Construction Division had been talked of for some time, but Hartman had held back, fearful of lowering morale. While Groves took off on a quick trip to Blanding, Hartman briefed his senior officers: Groves would take over the Fixed Fee Branch within a day or two; everyone would give him full support; Loving would continue as chief negotiator.<sup>135</sup> Returning to Washington on the

<sup>132</sup> Memo, OASW for Reybold, 17 Oct 40. Madigan Files, 101.1 Canton Design and Constr.

<sup>133</sup> (1) OCS, Notes of Confs, 26 Sep 1940—. (2) OCS, Daily Summary of Papers Cleared Through OSGS. (3) Table, prepared in EHD, National Guard, Induction, Completion and Occupancy Schedules, Jul 40–Mar 41. (4) *Time*, November 25, 1940, pp. 18–19.

<sup>134</sup> (1) Ltr, John J. McCloy to authors, 13 Aug 57. (2) Memo, Madigan for Burns, 13 Nov 40. Madigan Files, 100.3 FF Br.

<sup>135</sup> Groves Interv, 19 Jun 56.

14th, Groves assumed his new rank and duties. Recalling the situation that confronted him, he said:

During the first week that I was on duty there, I could not walk out of my office down the corridor to Hartman's office without being literally assailed by the officers or civilian engineers with liaison responsibility for the various camps. It is no exaggeration to state that during this period decisions involving up to \$5,000,000 were made at the rate of one about every 100 feet of corridor walked. Usually four or five men would keep trailing me to take the place of the man who had first gotten hold of me. The reason for this, I believe, was that they had been completely overwhelmed with the decisions that they had to make and that they had not been able to obtain any decisions or advice or even to see their single superior, Mr. Loving, on their direct problems.<sup>136</sup>

The new chief had his work cut out for him.

With Hartman's advice and approval, Groves made a number of changes. In rapid succession, he took the following steps: installed a telephone for each of the SCQM's and told them the sky was the limit on calls; demanded weekly progress reports from the CQM's; set a time limit of one week for processing reimbursement vouchers; sent an expediter to every project reporting a shortage of lumber; and held four regional conferences of architect-engineers, contractors, and CQM's. Above all, he emphasized the importance of meeting construction deadlines. He told contractors to hire special equipment, pay premium prices for quick deliveries, and take whatever shortcuts they deemed neces-

sary.<sup>137</sup> Mindful "that the world situation did not permit any delay in getting our troops into training," Groves bent every effort toward early completion of the camps.<sup>138</sup>

Perhaps the most important of his early innovations was a more practical method of scheduling construction. Acting on instructions from G-4, Hartman had given each contractor the final completion date for his project at the time of negotiations. Because the Army did not intend to send troops into camp until construction forces had moved out, contractors were free to schedule their operations as they saw fit. On 23 November Groves announced a new policy. Henceforth, contractors would co-ordinate their plans with the scheduled dates of troop arrivals. Barracks and mess halls would have top priority, and so would hospital wings for first arrivals. Soldiers would move into finished portions of the camps while builders completed the remainder.<sup>139</sup> By "changing policy in the middle of construction," Groves hoped to keep pace with induction schedules.<sup>140</sup>

Unlike Loving, who, as chief negotia-

<sup>137</sup> (1) Telg, FF Br to CQM's, 14 Nov 40. EHD Files. (2) Ltr, Constr Div to CQM's, 22 Nov 40. QM 600.1 (CPFF Policy) I. (3) Ltr, FF Br to CQM's, 23 Nov 40. 107 (Progress Schedules). (4) Notes for Discussion, Mtgs of Contractors, A-E's, and CQM's, 25 Nov 40, at Washington, D.C., 27 Nov 40, at Atlanta, Ga., 2 Dec 40, at St Louis, Mo., and 5 Dec 40, at Los Angeles, Cal., prepared by FF Br. EHD Files. (5) Ltr, FF Br to CQM Cp Forrest, 23 Nov 40. 600.1 (Cp Forrest) (Labor) I. (6) Notes of Conf held at Washington, D.C., 25 Nov 40. WPB-PD File, 411.33 Constr Proj—Mil—Jun 40-41. (7) Constr Div OQMG, FF Ltr 27, 3 Dec 40. EHD Files.

<sup>138</sup> Groves Comments, V, 4.

<sup>139</sup> Memo, FF Br to all CQM's, 23 Nov 40. 652 (Indiantown Gap).

<sup>140</sup> Testimony of Col Groves, 30 Apr 41. In Truman Comm *Hearings*, Part 2, p. 571.

<sup>136</sup> Groves Comments, X, 12a.

tor, could seldom leave Washington, Groves spent one-third of his time on the road. During his first month in the Fixed Fee Branch, he inspected a dozen projects in the East, South, and West. These visits sometimes led to sweeping changes. At San Luis Obispo, he relieved the CQM. At Roberts, he ordered preparation of a new layout. At Forrest, he fired six thousand workers, eliminated 27 percent of the buildings, and extended the completion date.<sup>141</sup> His energetic leadership produced results. Carey, visiting Camp Forrest a week after Groves had been there, found conditions much improved. "The reduced forces are now much better spread out, and the organization is going about its work with a pep and confidence woefully lacking in the past," he told Harrison. "The net result will be that this work, in my judgment, will meet the revised dates set up by Colonel Groves, and at a very substantial saving in the total cost."<sup>142</sup>

By the second week of December, construction officers felt the worst was over. More than half a million men were

under arms, and revised mobilization schedules were being met. General Hartman estimated that the housing program originally assigned to him, the barracks, kitchens, storehouses, and essential hospitals for two million men—not the innumerable extras added later—was approximately 95 percent complete. Finishing the camps and cantonments was, in his opinion, only a matter of weeks.<sup>143</sup> Colonel Groves was also optimistic. On 10 December he told Madigan, "I think it is going much better. I have gotten so I can sleep at night."<sup>144</sup> Years later, Groves reflected: "Actually, the great crisis where the Army was really in danger of being overwhelmed, beside which all other crises were insignificant, was the situation at the time I joined General Hartman in November of 1940."<sup>145</sup> By mid-December, he maintained, the crisis was past.<sup>146</sup>

How did the heads of the War Department, Secretary Stimson and General Marshall, view the performance of the Quartermaster Corps? The answer became clear as the long struggle over the construction function reached its denouement.

<sup>141</sup> (1) List, Constr Div (19 Dec 40), sub: Insp Trips Made by Col Groves From Jul 22 Through Dec 19. Opns Br Files, Gen. (2) Tel Conv, Groves and CQM San Luis Obispo, 6 Dec 40. Opns Br Files, San Luis Obispo. (3) Notes of Conf at San Miguel, Calif., 3 Dec 40. Opns Br Files, Cp Roberts.

<sup>142</sup> Memo, Carey for Harrison, 22 Dec 40. WPB-PD File, 411.33 Constr Proj—Mil—Jun 40-41.

<sup>143</sup> Statement of Gen Hartman, 5 Jul 55, p. 17.

<sup>144</sup> Tel Conv, Groves and Madigan, 10 Dec 40. Opns Br Files, Ord.

<sup>145</sup> Groves Comments, X, 12a.

<sup>146</sup> Groves Interv, 19 Jun 56.